

Plugged + Abandoned- 1/29/78

FILE NOTATION

Entered in NID File
Location Map Pinned
Card Indexed
✓
✓
✓

Checked by Chief
Approval Letter
Disapproval Letter

COMPLETION DATA:

Date Well Completed 7-29-78

Location Inspected

OW..... WW..... TA.....

Bond released

GW..... OS..... PA.....
✓

State or Fee Land

LOGS FILED

Driller's Log.....
✓

Electric Logs (No.)
✓

E..... I..... Dual I Lat..... GR-N..... Micro.....

BHC Sonic GR..... Lat..... MI-L..... Sonic.....

CBLog..... CCLog..... Others.....

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-7601
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
2. NAME OF OPERATOR PACIFIC TRANSMISSION SUPPLY COMPANY		7. UNIT AGREEMENT NAME
3. ADDRESS OF OPERATOR P.O. Box 3093, Casper, WY 82602		8. FARM OR LEASE NAME Amoco - Federal
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 702' FNL, 2170' FWL (NE NW) Section 29, T9S, R16E, S.L.B & M At proposed prod. zone		9. WELL NO. 21-29
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*		10. FIELD AND POOL, OR WILDCAT Wildcat
15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE 2545.69	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 29, T9S, R16E
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	19. PROPOSED DEPTH 4700	12. COUNTY OR PARISH Duchesne
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 6212 Ungraded ground	20. ROTARY OR CABLE TOOLS Rotary	13. STATE Utah
22. APPROX. DATE WORK WILL START* 6/15/78		

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
24"	20"	Line pipe	30	Ready mix to surface
12 1/4"	9-5/8"	36#	300	150 sx
7-7/8"	4 1/2"	10.5#	As required	As required

Operator proposes to drill a well to penetrate the upper 350' of the Douglas Creek member of the Green River formation or to a total depth of 4700 feet. Should oil or gas be found in commercial quantities, 4 1/2" production casing will be run and cemented. The well will be drilled according to the attached prognosis and BOP equipment will be maintained at all times as specified in the pressure containment plan attached.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED <u>E. E. Mulholland</u> TITLE <u>Operations Engineer</u> DATE <u>5/16/78</u>	
(This space for Federal or State office use)	
PERMIT NO. <u>43-013-30446</u>	APPROVAL DATE _____
APPROVED BY _____ TITLE _____ DATE _____	
CONDITIONS OF APPROVAL, IF ANY _____	

3-USGS-SLC, Utah, 1-Div. of O&G & Mining-SLC, UT
1-J.L. Wroble, 1-E.R. Henry, 1-Partner, 1-File

*See Instructions On Reverse Side

DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of lease

DISTRICT LAND OFFICE: SALT LAKE CITY, UTAH
SERIAL No.: U-7601

and hereby designates

NAME: PACIFIC TRANSMISSION SUPPLY COMPANY
ADDRESS: 633 SEVENTEENTH STREET, SUITE 2140, DENVER, COLORADO 80202

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable): DUCHESNE COUNTY, UTAH

Township 9 South, Range 16 East, SLM
Section 28: SW/4, W/2 SE/4
Section 29: All
Section 30: All
Section 31: Lot 1, NE/4 NW/4, NE/4
Section 33: All
Section 34: SW/4

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

AMOCO PRODUCTION COMPANY

By


(Signature of lessee)

Its Attorney-in-Fact

March 8, 1978

(Date)

Security Life Building

Denver, Colorado 80202

(Address)

B78
7/10/78

WELL PROGNOSIS
PTS #21-29 AMOCO FEDERAL
GILSONITE DRAW UNIT
DUCHESNE COUNTY, UTAH

LOCATION: 702' FNL, 2170' FWL, (NE NW) Section 29, T9S, R16E, S.L.B & M,
Duchesne County, Utah

OPERATOR: Pacific Transmission Supply Company

LEASE: U-7601

ELEVATION: 6212 Ungraded Ground

DRILLING CONTRACTOR: To be selected

FORMATION TOPS & DATUM:

	<u>Depth</u>	<u>Datum</u>
Green River Formation	1535'	+4677
Parachute Creek member	2628'	+3584
H Marker	3830'	+2382
Douglas Creek member	4577'	+1635
TOTAL DEPTH	4700'	

SAMPLE COLLECTION: Ten (10) foot samples from under surface to total depth.
Samples will be collected by drilling crew for the wellsite geologist. Frequency of sample collection may be changed at geologist's discretion.

LOGGING PROGRAM: Dual Induction Laterolog
Borehole Compensated Sonic w/Gamma Ray & Caliper
Compensated Formation Density w/Gamma Ray & Caliper

MUD LOGGING: Portable mud logging unit operated by wellsite geologist. Mud logging unit should be in operation from below surface casing.

DRILLSTEM TESTING: All significant shows of oil and gas will be drillstem tested.

MUD PROGRAM:

<u>Interval</u> <u>feet</u>	<u>Mud weight</u> <u>lbs/gal</u>	<u>Viscosity</u> <u>Sec./qt.</u>	<u>Fluid loss</u> <u>ML/30 mins</u>	<u>Type</u>
0-300	8.4-8.7	26-29	No control	Water
300-4000	8.7-9.0	26-29	No control	Salt water 60-80,000 ppm
4000-TD	9.2-9.5	34-45	12 cc or less	Salt mud 60,000 ppm

DRILLING PROGRAM:

- 1) Move in dry hole digger and set and cement 30' of 20" conductor.
- 2) Move in rotary tools. Drill 12 $\frac{1}{4}$ " hole and set and cement 9-5/8", 36#, K-55 casing at +300'. WOC.
- 3) Drill out w/7-7/8" bit to total depth. Log and evaluate well.
- 4) In the event commercial production is indicated, run 4 $\frac{1}{2}$ ", 10.5#, K-55 casing and cement across potential zones.
- 5) Release rig and develop completion procedure.

PERSONNEL & MAILING INFORMATION:

Dee E. Beardsley, Manager of Operations
Pacific Transmission Supply Company
P.O. Box 3093
Casper, WY 82602
Telephone: Office 307-265-1027
Home 307-234-7666

E. E. Mulholland, Operations Engineer
Pacific Transmission Supply Company
P.O. Box 3093
Casper, WY 82602
Telephone: Office 307-265-1027
Home 307-265-4191

NOTIFICATION OF SHOWS, DST'S, & UNUSUAL PROBLEMS:

Dee E. Beardsley	Office: 307-265-1027	Home: 307-234-7666
J. L. Wroble	303-571-1662	303-770-2667
E. E. Mulholland	307-265-1027	307-265-4191
B. W. Allen	307-234-3571	307-237-9023
R. G. Jensen	303-820-4040	303-985-5533
C. L. Walker	303-820-4040	303-985-2096

DISTRIBUTION OF INFORMATION:

PACIFIC TRANSMISSION SUPPLY COMPANY
P.O. Box 3093
Casper, WY 82602
Attn: Mr. D. E. Beardsley

B. W. Allen, Engineer
P.O. Box 2352
Casper, WY 82602

U. S. GEOLOGICAL SURVEY
8426 Federal Building
Salt Lake City, UT 84138
Attn: Mr. Edgar W. Guynn

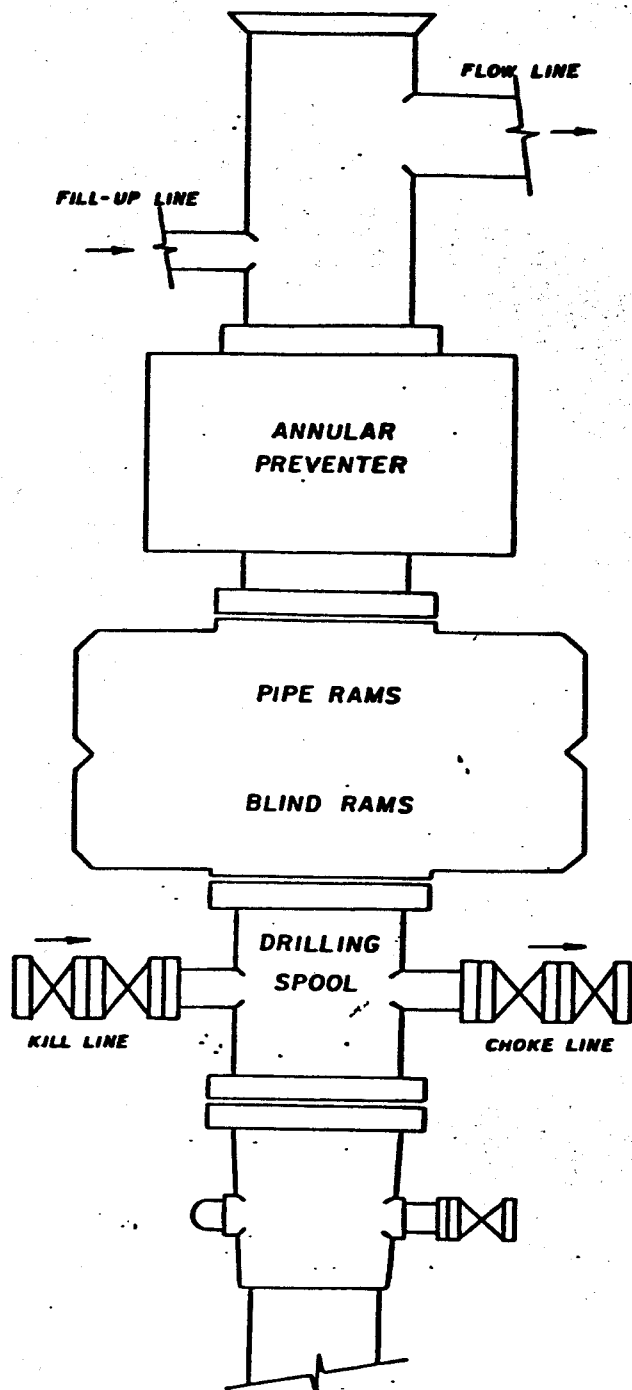
AMOCO PRODUCTION COMPANY
Security Life Building
Denver, CO 80202
Attn: Mr. R. G. Jensen or
Mr. C. L. Walker

PACIFIC TRANSMISSION SUPPLY COMPANY
633-17th Street, Suite 2140
Denver, CO 80202
Attn: Mr. J. L. Wroble

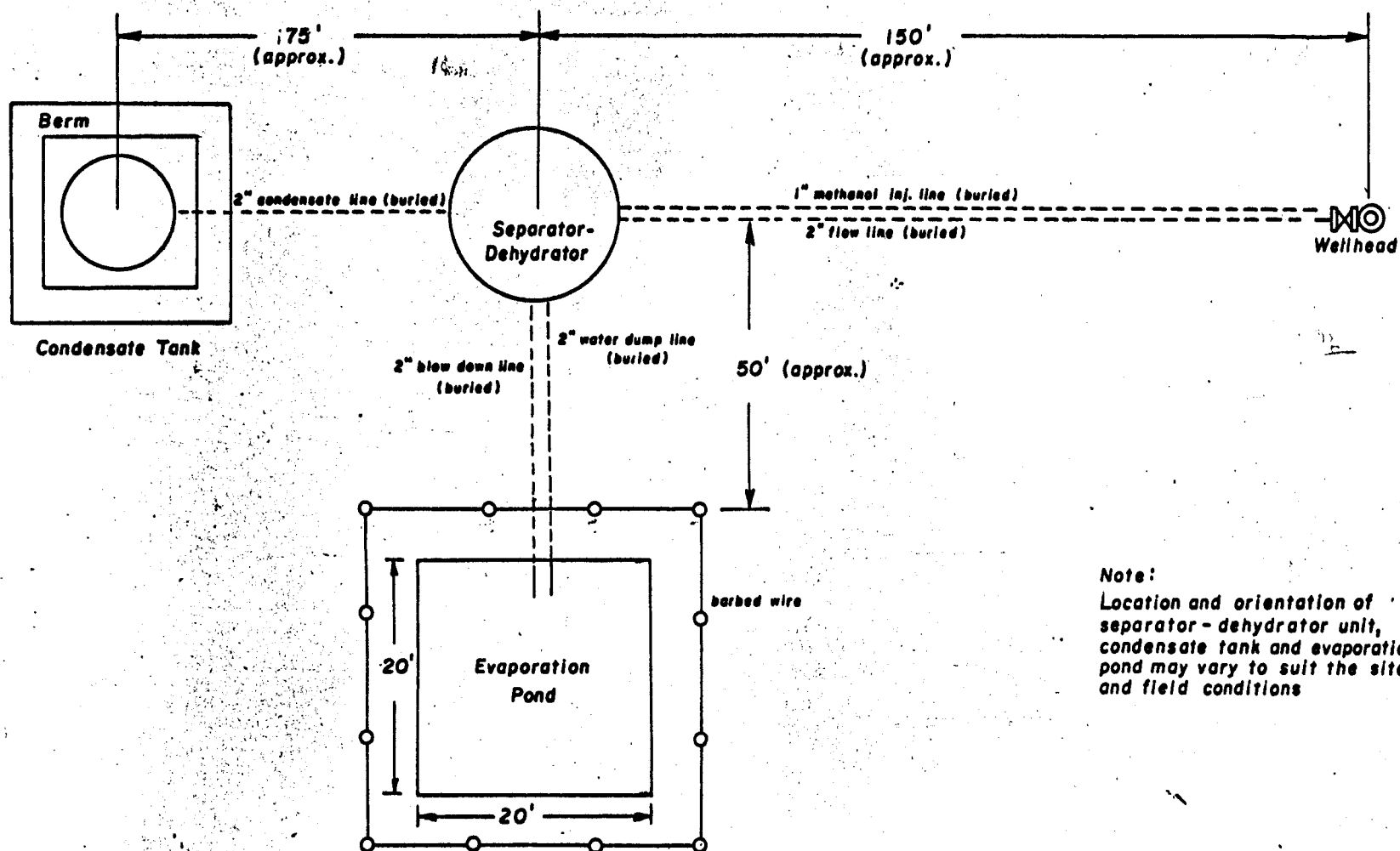
DIVISION OF OIL, GAS, & MINING
1588 West North Temple
Salt Lake City, UT 84116
Attn: Mr. P. L. Driscoll

PACIFIC TRANSMISSION SUPPLY

BOP AND PRESSURE CONTAINMENT DATA



1. BOP equipment shall consist of a double gate, hydraulically operated preventer with pipe and blind rams or two single ram type preventers, one equipped with pipe rams, the other with blind rams and an annular type preventer, all to be 10" - 3000 W.P.
2. BOP's are to be well-braced with hand controls extended clear of substructure.
3. Accumulator to provide closing pressure in excess of that required with sufficient volume to operate all components.
4. Auxiliary equipment: Lower kelly cock, full opening stabbing valve, 2½" choke manifold, pit level indicator and/or flow sensors with alarms.
5. All BOP equipment, auxiliary equipment stand pipe and valves and rotary hose to be tested to the rated pressure of the BOP's at time of installation and every 30 days thereafter. BOP's to be mechanically checked daily.
6. Modification of hook-up or testing procedure must be approved in writing on tour reports by wellsite representative.



Note:
Location and orientation of separator-dehydrator unit, condensate tank and evaporation pond may vary to suit the site and field conditions

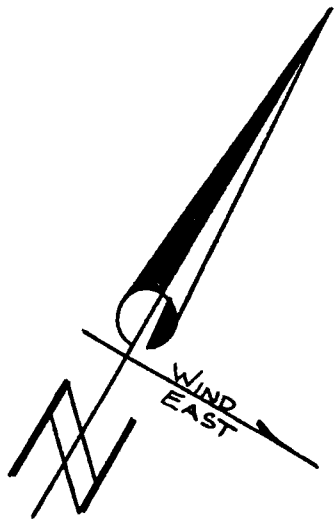
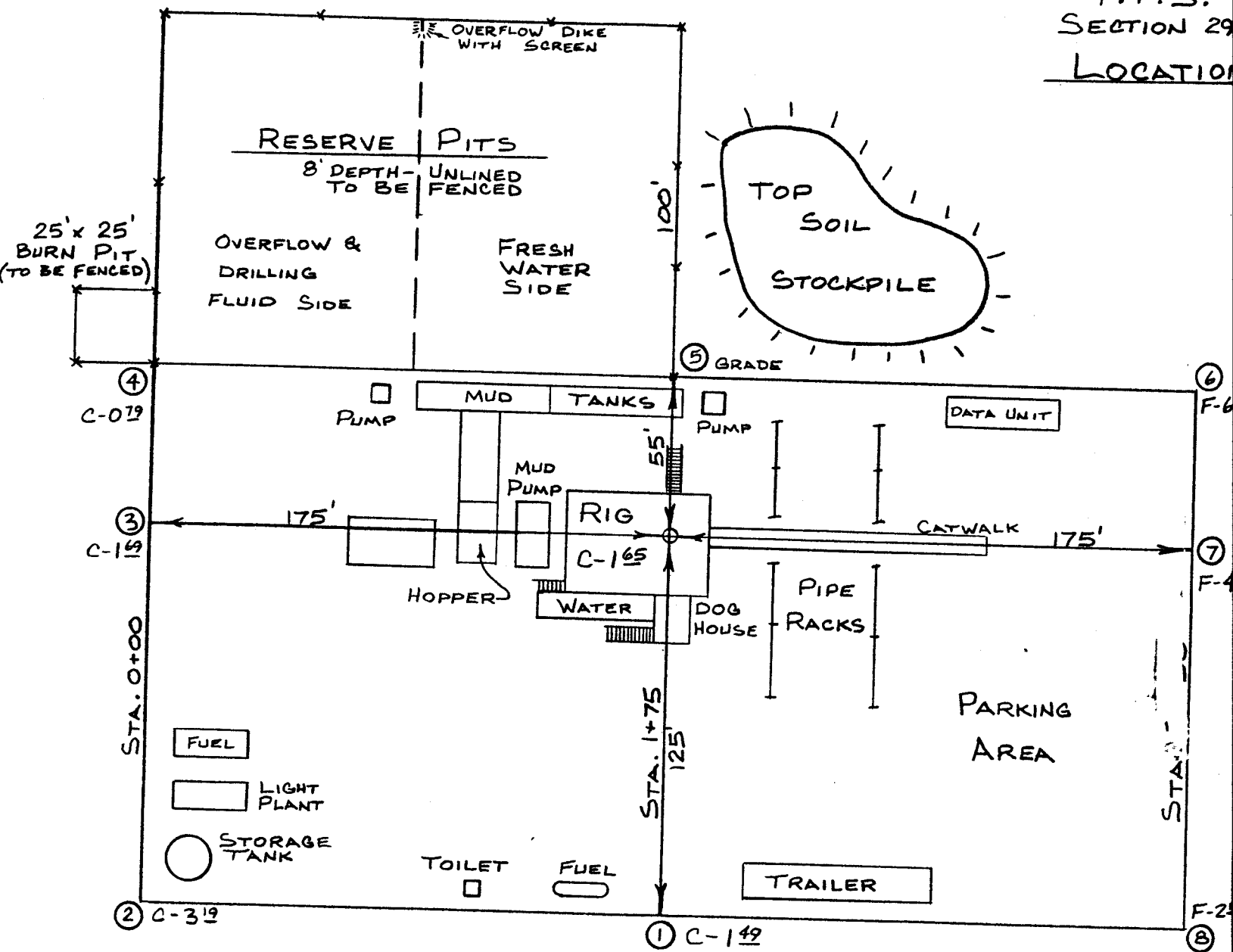
PACIFIC TRANSMISSION SUPPLY CO.

**Typical Plot Plan for
Separator-Dehydrator
Installation**

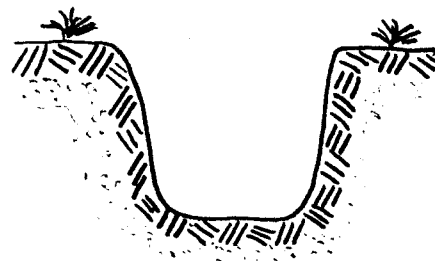
PACIFIC TR

P.T.S.
SECTION 29

LOCATION



SOILS LITHOLOGY
- NO SCALE -



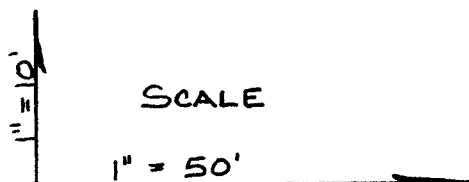
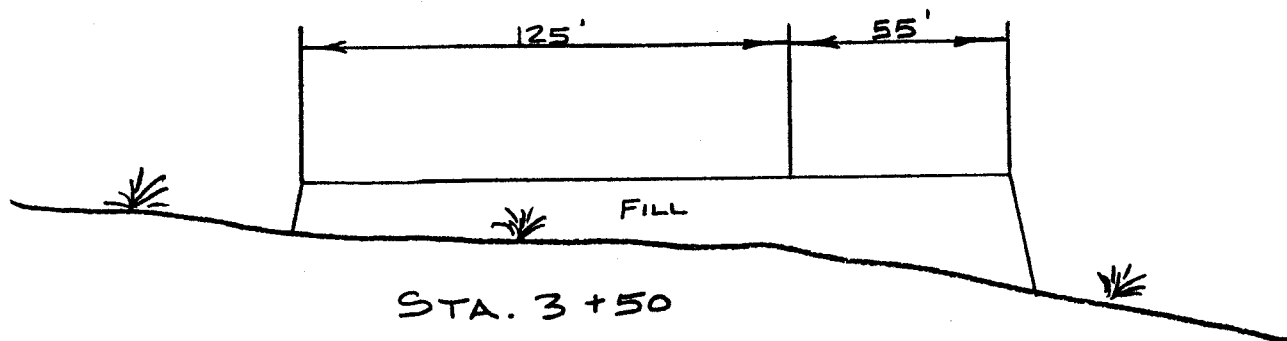
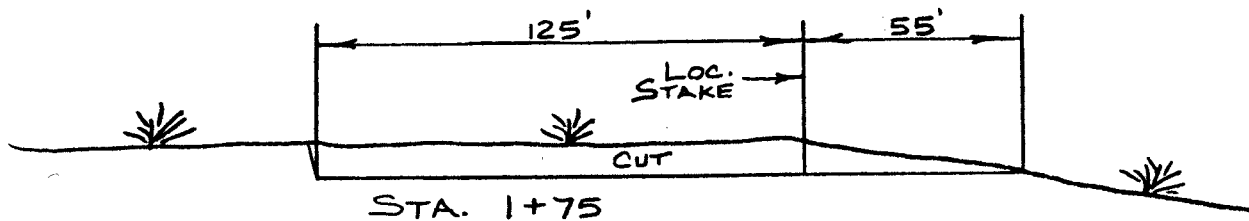
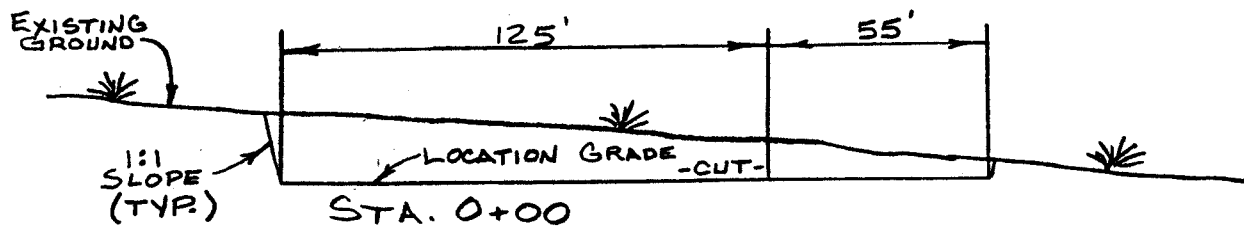
LIGHT BROWN
SANDY SHAL
(SM-ML)

TRANSMISSION SUPPLY

#21-29 AMOCO FEDERAL
 0, T9S, R16E, S.L.B. & M.
 N LAYOUT & CUT SHEET

C
R
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S
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N
S



APPROXIMATE YARDAGES

CUT - 2,799 Cu. Yds.

FILL - 2,212 Cu. Yds.

PACIFIC TRANSMISSION SUPPLY
PROPOSED LOCATION
P.T.S. #21-29 AMOCO FEDERAL

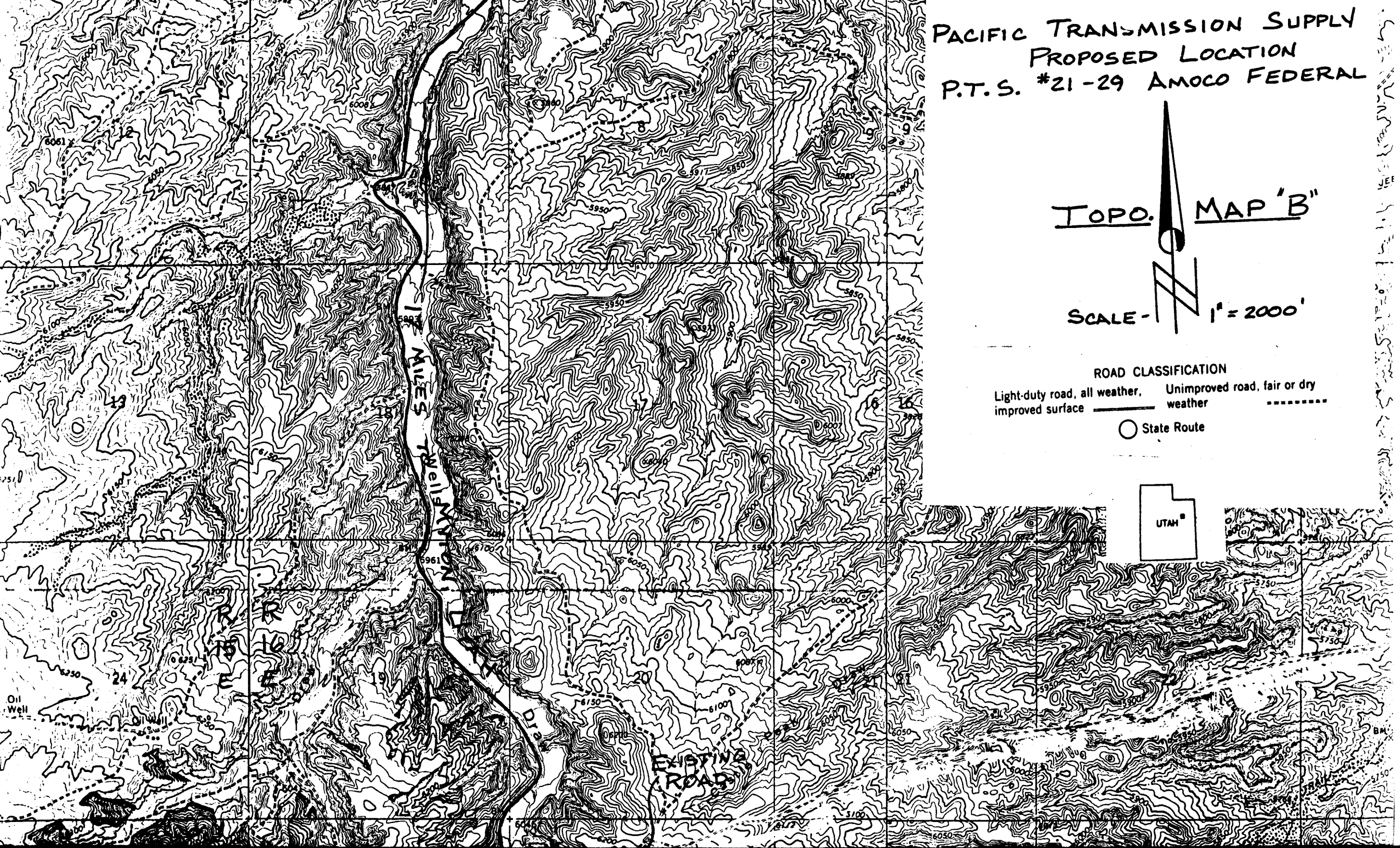
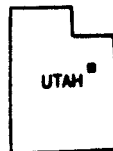
TOPO. MAP "B"

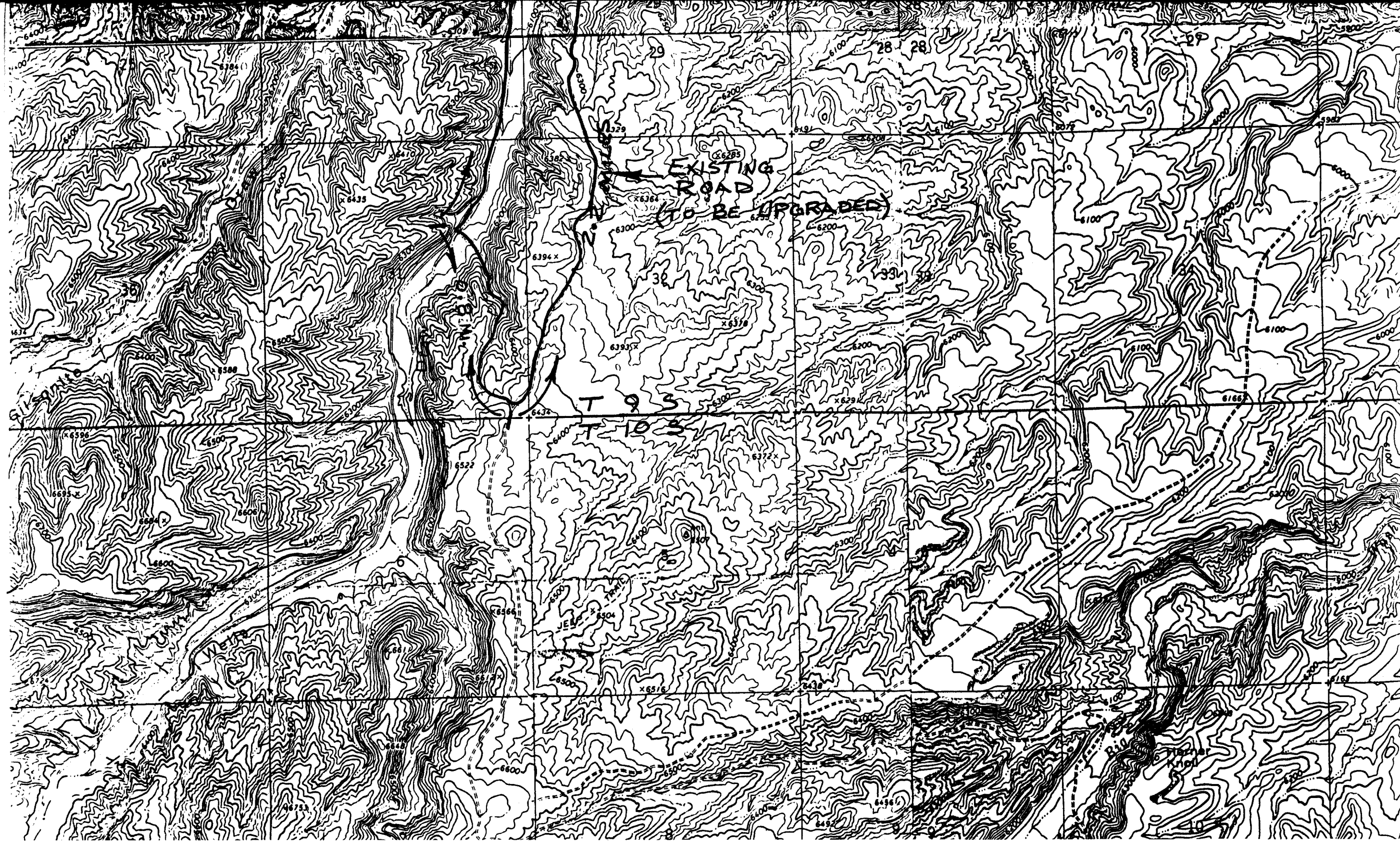
SCALE - 1" = 2000'

ROAD CLASSIFICATION

Light-duty road, all weather, improved surface —————
Unimproved road, fair or dry weather

○ State Route





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PROPOSED CASING AND CEMENTING PROGRAM

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7-7/8"	4 1/2"	10.5#	As required	As required

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24.

SIGNED

E. E. Mulholland

TITLE

Operations Engineer

DATE

5/16/78

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

E. E. Mulholland

DISTRICT ENGINEER

DATE

JUN 16 1978

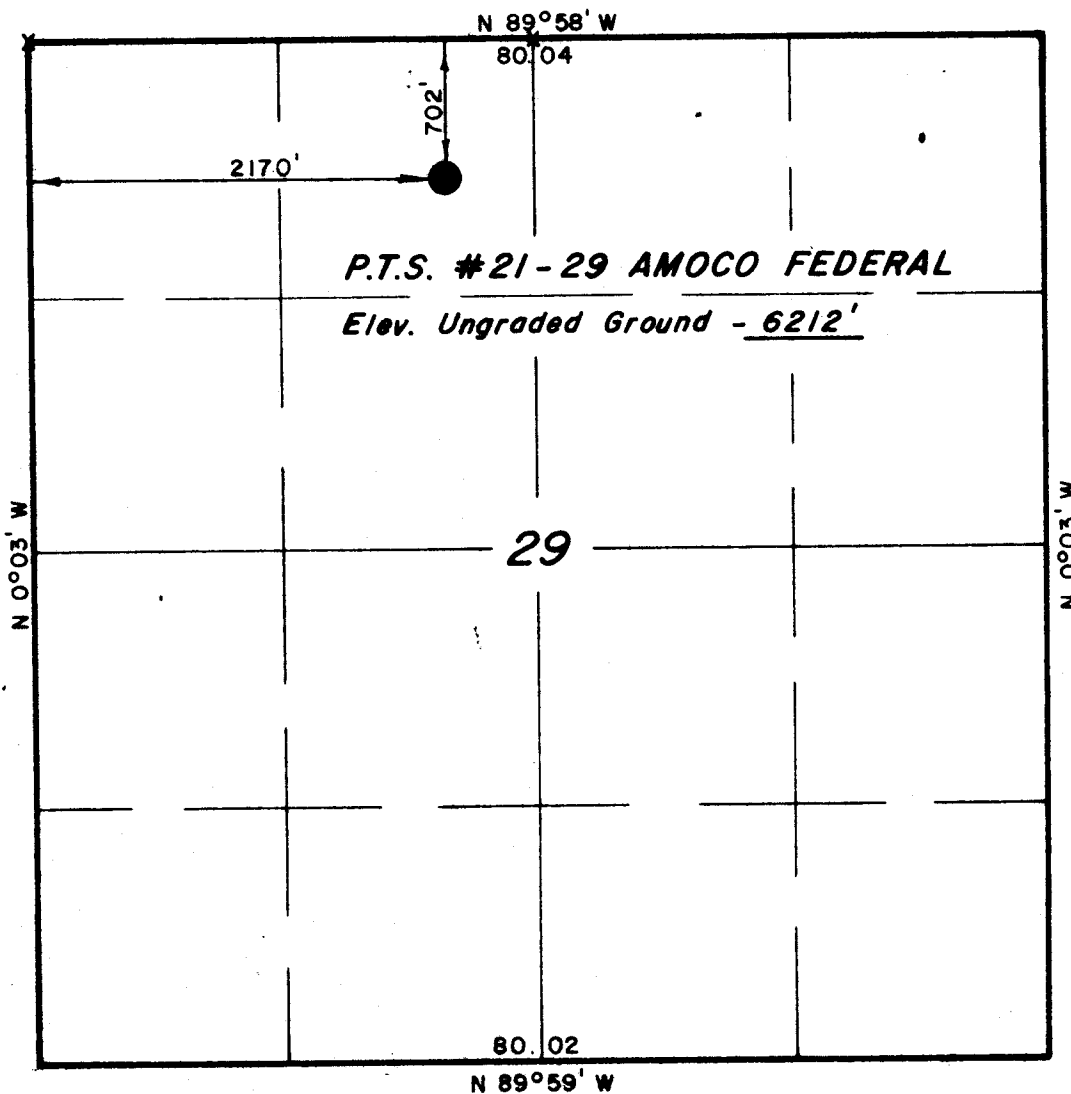
CONDITIONS OF APPROVAL, IF ANY:

3-USGS-SLC, Utah, 1-Div. of O&G&Mining-SLC, UT
1-J.L. Wroble, 1-E.R. Henry, 1-Partner, 1-File

*See Instructions On Reverse Side

State O&G

T9S, R16E, S.L.B. & M.



P.T.S. #21-29 AMOCO FEDERAL
Elev. Ungraded Ground - 6212'

29

X = Section Corners Located

PROJECT

PACIFIC TRANSMISSION

Well location, **P.T.S. #21-29 AMOCO FEDERAL**, located as shown in the NE 1/4 NW 1/4 Section 29, T9S, R16E, S.L.B. & M. Duchesne County, Utah.



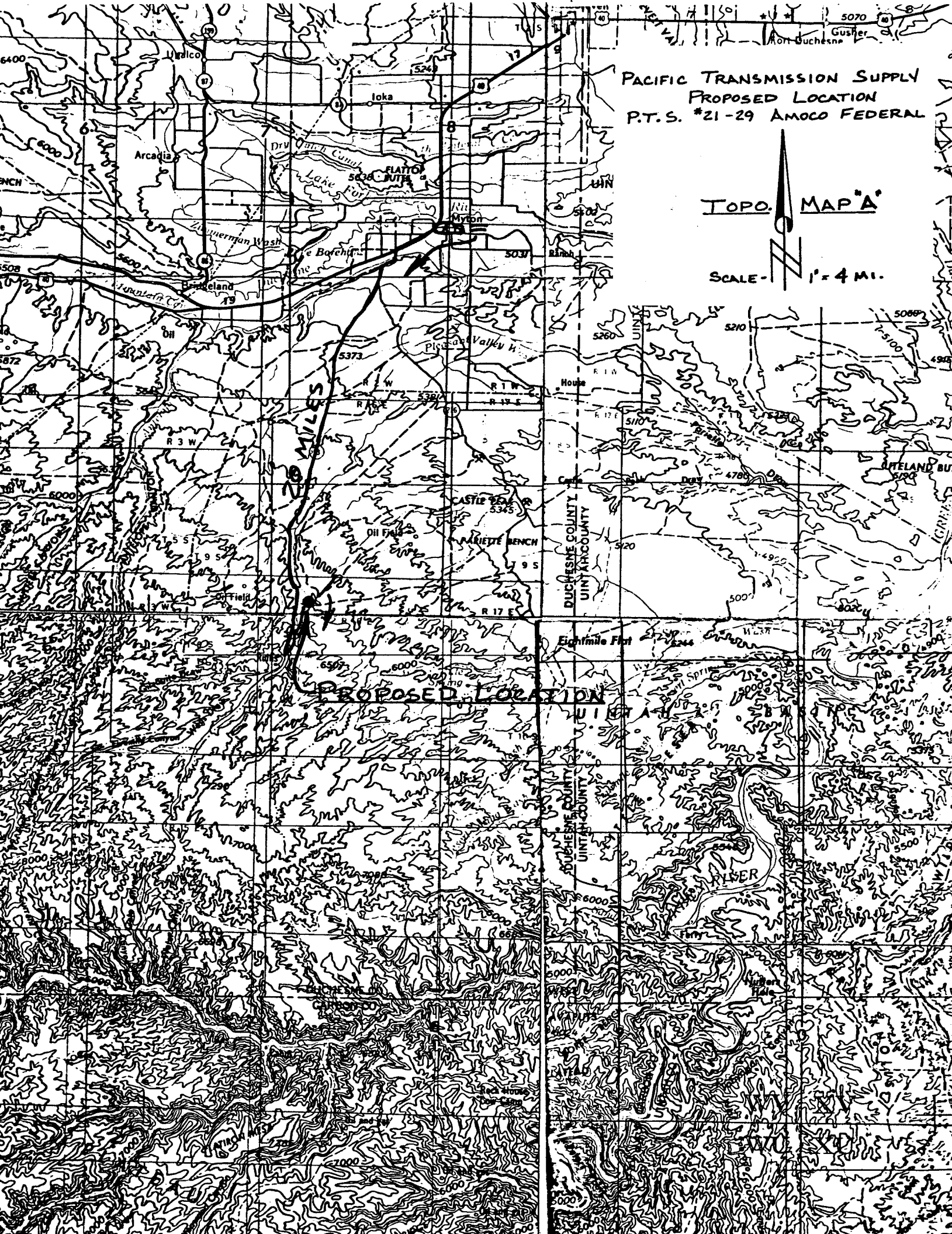
CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

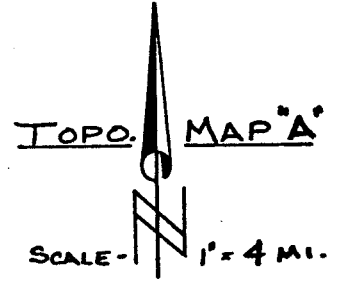
[Signature]
 REGISTERED LAND SURVEYOR
 REGISTRATION NO 2454
 STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
 P.O. BOX Q - 110 EAST - FIRST SOUTH
 VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 5/12/78
PARTY LDT DS TJ DJ	REFERENCES GLO Plat
WEATHER Fair	FILE PACIFIC TRANSMISSION



PACIFIC TRANSMISSION SUPPLY
PROPOSED LOCATION
P.T.S. #21-29 AMOCO FEDERAL



PROPOSED LOCATION



PACIFIC TRANSMISSION SUPPLY COMPANY

13 Point Surface Use Plan

for

Well Location

. P.T.S. #21-29 Amoco Federal

Located In

Section 29, T9S, R16E, S.L.B. & M.

Duchesne County, Utah

Pacific Transmission Supply .
P.T.S. #21-29 Amoco Federal
Section 29, T9S, R16E, S.L.B. & M.

1. EXISTING ROADS

See attached Topographic Map "A", to reach the Pacific Transmission Supply Company well location, P.T.S. #21-29 Amoco Federal, located in Section 29, T9S, R16E, S.L.B. & M., from Myton, Utah:

Proceed Southwesterly out of Myton, Utah along U.S. Highway 40, 1.75 miles to the junction of this highway and Utah State Road 53 to the South. Proceed Southerly along the State road 15.2 miles to the junction of this road and an existing dirt road to the Southeast; proceed Southeasterly along this road 0.8 miles to the junction of this road and an existing dirt road to the Northeast; proceed Northeasterly along this road 2.2 miles to the proposed location site in the NE 1/4 NW 1/4 said Section 29.

The last 3.1 miles of the above described road will need to be upgraded to meet the requirements in Item #2.

There is no construction anticipated on any other of the above described roads. It will meet the standards necessary for the hauling of equipment during the drilling and production of this well.

2. PLANNED ACCESS ROAD

See Topographic Map "B".

In order to facilitate the anticipated traffic flow necessary to drill and produce this well, the last 3.1 miles of road described in Item #1 will be upgraded to meet the following standards:

The road will be an 18' crown road (9' either side of the centerline) with drain ditches along either side of the road where it is determined necessary in order to handle any run-off from any normal meteorological conditions that are prevalent to this area.

Back slopes along the cut areas of the road will be 1 1/2 to 1 slopes and terraced.

The road will be centerline flagged prior to the commencement of construction.

The grade of this road will vary from flat to 8%, but will not exceed this limit. This road will be constructed from native borrow accumulated during construction.

If deemed necessary by the local governmental agencies or their representatives, turnouts will be installed for safety purposes every 0.25 miles or on the top of ridges that will provide the greatest sight distance. These turnouts will be 200' in length and 12' in width and will be tapered from the shoulder of the road for a distance of 50' in length at both the access and outlet end.

Any fences that are encountered along this access road will be cut and replaced with a cattleguard with a minimum width of 18' and a loading factor large enough to facilitate the heavy trucks required in the drilling and production of this well.

If cattleguards are to be located at existing gates, they will be installed with the above requirements and with a new gate installed at one end of the cattleguard.

The access from the road to the gate will be of such a nature that there will be no impedance of traffic flow along the main access road and no difficulties encountered by traffic utilizing the gate, either leaving or entering the proposed access road.

The terrain that is traversed by this road is relatively flat and is vegetated with sparce amounts of sagebrush and grasses.

3. LOCATION OF EXISTING WELLS

As shown on Topographic Map "B", there are no other wells within a one mile radius of the proposed well site. (See location plat for placement of Pacific Transmission Supply Company, well within the Section.)

4. LOCATION OF TANK BATTERIES, PRODUCTION FACILITIES, AND PRODUCTION GATHERING AND SERVICE LINES

All petroleum production facilities are to be contained within the proposed location site. There are no other Pacific Transmission Supply Company flow gathering, injection, or disposal lines within a one-mile radius of this location.

In the event production is established, plans for a gas flow line from this location to existing gathering lines of a main production line shall be submitted to the appropriate agencies for approval.

The rehabilitation of the disturbed area that is not required for the production of this well will meet the requirements of Items #7 and #10 and these requirements and standards will be adhered to.

5. LOCATION AND TYPE OF WATER SUPPLY

The proposed water source to be utilized for the drilling of this well is from the Pleasant Valley Canal at a source located in the SE 1/4 Section 4, T4S, R2W, U.S.B. & M. This water will be hauled by truck approximately 0.3 miles South along an existing road to the point where it intersects with State Road 53, in the SE 1/4 Section 4, T4S, R2W, U.S.B. & M.; thence Southerly utilizing existing roads described in Item #1, approximately 17.5 miles to the location site.

In the event this water source is not acceptable, other arrangements will be made with the proper authorities for an alternate source.

6. SOURCE OF CONSTRUCTION MATERIALS

All construction materials for this location site and access road shall be borrow materials accumulated during construction of the location site and access road. No additional road gravels or pit lining material from other sources are anticipated at this time, but if they are required, the appropriate actions will be taken to acquire them from private sources.

7. METHODS FOR HANDLING WASTE DISPOSAL

See Location Layout Sheet.

A reserve and burn pit will be constructed.

The reserve pit will be approximately 8' deep and at least one half of this depth shall be below the surface of the existing ground.

One half of the reserve pit will be used as a fresh water storage area during the drilling of this well and the other one half will be used to store non-flammable materials such as cuttings, salts, drilling fluids, chemicals, produced fluids, ect.

If deemed necessary by the agencies concerned, to prevent contamination to surrounding areas, the reserve pits will be lined with a gel.

7. METHODS FOR HANDLING WASTE DISPOSAL - continued

The pits will have an overhead flagging installed at such time as deemed necessary to protect the water fowl, wildlife, and domestic animals.

At the onset of drilling, this reserve pit will be fenced on three sides and at the time the drilling activities are completed, it will be fenced on the fourth side and allowed to dry completely prior to the time that backfilling and reclamation activities are attempted.

When the reserve pit dries and the reclamation activities commence, the pits will be covered with a minimum of four feet of soil and all requirements in Item #10 will be followed.

The burn pits will be constructed and fenced on all four sides with a small mesh wire to prevent flammable materials from escaping and creating a fire hazard.

A portable chemical toilet will be supplied for human waste.

8. ANCILLARY FACILITIES

There are no ancillary facilities planned for at the present time and none foreseen in the near future.

9. WELL SITE LAYOUT

See Location Layout Sheet.

The B.L.M. District Manager shall be notified before any construction begins on the proposed location site.

As mentioned in Item #7, the pits will be unlined unless it is determined by the representatives of the agencies involved that the materials are too porous and would cause contamination to the surrounding area; then the pits will be lined with a gel and any other type material necessary to make it safe and tight.

When drilling activities commence, all work shall proceed in a neat and orderly sequence.

10. PLANS FOR RESTORATION OF SURFACE

As there is some topsoil on the location site, all topsoil shall be stripped and stockpiled. See Location Layout Sheet and Item #9. When all drilling and production activities have been completed, the location site and access road will be reshaped to the original contour and stockpiled topsoil spread over the disturbed area.

Any drainages re-routed during the construction activities shall be restored to their original line of flow as near as possible. Fences around pits are to be removed upon completion of drilling activities and all waste being contained in the trash pit shall be buried with a minimum of 5' of cover.

As mentioned in Item #7, the reserve pit will be completely fenced and wired and overhead wire and flagging installed, if there is oil in the pits, and then allowed to completely dry before covering.

Restoration activities shall begin within 90 days after completion of the well. Once completion activities have begun, they shall be completed within 30 days.

10. PLANS FOR RESTORATION OF SURFACE - continued

When restoration activities have been completed, the location site and access ramp shall be reseeded with a seed mixture recommended by the B.L.M. District Manager when the moisture content of the soil is adequate for germination. The Lessee further covenants and agrees that all of said cleanup and restoration activities shall be done and performed in a diligent and most workmanlike manner and in strict conformity with the above mentioned Items #7 and #10.

11. OTHER INFORMATION

The Topography of the General Area (See Topographic Map "A".)

The area is a basin formed by the Uinta Mountains to the North and Roan Plateau to the South.

The basin floor is interlaced with numerous canyons and ridges formed by the non-perennial streams of the area. The sides of these canyons are steep and ledges formed in sandstones, conglomerates, and shale deposits are extremely common to the area.

The geologic structures of the area that are visible are of the Uinta formation (Eocene Epoch) Tertiary Period in the upper elevations and the cobblestone and younger alluvial deposits from the Quaternary Period and of the Duchesne River formation in the lower elevations.

Outcrops of sandstone ledges, conglomerate deposits, and shale are common in this area.

The topsoil in the area range from a light brownish-gray sandy shale (SM-ML) type soil poorly graded gravels and shales to a clayey (OL) type soil.

The majority of the numerous washes and streams in the area are of a non-perennial nature flowing during the early spring run-off and extremely heavy rain storms of long duration which are extremely rare as the normal annual rainfall in the area is only 8".

The Duchesne River to the far North of this location is the only perennial stream that is affected by this location site.

Due to the low precipitation average, climate conditions, and the marginal types of soils, the vegetation that is found in the area is common of the semi-arid region we are located in. It consists of areas of sagebrush, rabbitbrush, some grasses, and cacti as the primary flora. This is also true for the lower elevations.

The fauna of the area consists predominantly of the mule deer, coyotes, rabbits, and varieties of small squirrels and other types of rodents. The area is used by man for the primary purpose of grazing domestic sheep and cattle.

The birds of the area are raptors, finches, ground sparrows, magpies, crows, and jays.

The Topography of the Immediate Area (See Topographic Map "B".)

P.T.S. #21-29 Amoco Federal, is located on a relatively flat area atop a small ridge at the mouth of Castle Peak Draw. The ridge slopes to the North and South at a fairly gradual rate.

The majority of the drainages in the area around this location drain to the Southwest.

Pacific Transmission Supply Company
P.T.S. #21-29 Amoco Federal
Section 29, T9S, R16E. S.L.B. & M.

11. OTHER INFORMATION - continued

The terrain in the vicinity of the location slopes to the Northwest through the location site at approximately a 2% grade.

The vegetation in the immediate area surrounding the location site is predominantly sagebrush and grasses. There are no occupied dwellings or other facilities of this nature in the general area. There are no visible archaeological, historical, or cultural sites within any reasonable proximity of the proposed location site. (See Topographic Map "B".)

12. LESSEE'S OR OPERATORS REPRESENTATIVE

Ron Dethlefsen
80 South 1500 East
Vernal, Utah 84078

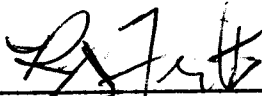
TELE: 789-4573

13. CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge and belief, true and correct; that the work associated with the operations proposed herein will be performed by Pacific Transmission Supply Company and its contractors and sub-contractors in conformity with this plan and terms and conditions under which it is approved.

Date

May 17, 1978

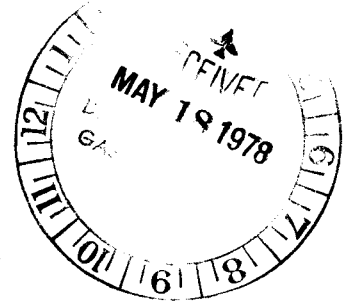


Ronald J. Firth - Petroleum Engineer

PACIFIC TRANSMISSION SUPPLY COMPANY

212 GOODSTEIN BUILDING
P. O. BOX 3093
CASPER, WYOMING 82602
(307) 265-1027

May 16, 1978



Mr. P.L. Driscoll
Division of Oil, Gas & Mining
1588 West North Temple
Salt Lake City, UT 84116

Re: PTS #21-29 Amoco-Federal
NE NW Sec. 29, T9S, R16E
Duchesne County, Utah
U.S.G.S. Form 9-331 C -
Application for Permit to Drill

Dear Mr. Driscoll:

Please find enclosed for your information a copy of the application for permit to drill the above captioned well. Enclosed with the application to drill are the following documents:

- 1) Designation of Operator
- 2) Well Prognosis
- 3) BOP & Pressure Containment Data
- 4) Typical Plot Plan for Separator-Dehydrator Installation
- 5) 13 Point Surface Use Plan
- 6) Surveyor's Plat
- 7) Vicinity & Location Map

Very truly yours,

E. E. Mulholland

E. E. MULHOLLAND
OPERATIONS ENGINEER

/ks

Encl.

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

** FILE NOTATIONS **

Lower Green River
NE NW

Date: May 19 -
Operator: Pacific Transmission Supply
Well No: Amco - Fed. 21-29
Location: Sec. 29 T. 9S R. 16E County: Duchesne

File Prepared: ☒
Card Indexed: ☒

Entered on N.I.D.: ☒
Completion Sheet: ☒

API NUMBER: 43-013-3046

CHECKED BY:

Administrative Assistant [Signature]

Remarks: No other info - Fed 29

Petroleum Engineer [Signature]

Remarks: [Signature]

Director [Signature]

Remarks:

INCLUDE WITHIN APPROVAL LETTER:

Bond Required: [Signature]

Survey Plat Required: ☐

Order No. [Signature]

Surface Casing Change ☐
to [Signature]

Rule C-3(c), Topographic exception/company owns or controls acreage
within a 660' radius of proposed site ☒

O.K. Rule C-3 ☐

O.K. In [Signature]

Unit ☐

Other:

☒ Letter Written/Approved

May 22, 1978

Pacific Transmission Supply Company
P.O. Box 3093
Casper, Wyoming 82602

Re: Well No. Amoco-Federal 21-29
Sec. 29, T. 9 S, R. 16 E,
Duchesne County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill the above referred to well is hereby granted in accordance with Rule C-3(c), General Rules and Regulations and Rules of Practice and Procedure.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

PATRICK L. DRISCOLL - Chief Petroleum Engineer
HOME: 582-7247
OFFICE: 533-5771

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling.

Further, it is requested that this Division be notified within 24 hours after drilling operations commence, and that the drilling contractor and rig number be identified.

The API number assigned to this well is 43-013-30446.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

CLEON B. FEIGHT
Director

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.

U-7601

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Amoco - Federal

9. WELL NO.

21-29

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec. 29, T9S, R16E

12. COUNTY OR PARISH 13. STATE

Duchesne

Utah

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals.)

1. OIL WELL ☐ GAS WELL ☒ OTHER

2. NAME OF OPERATOR

PACIFIC TRANSMISSION SUPPLY COMPANY

3. ADDRESS OF OPERATOR

P.O. Box 3093, Casper, WY 82602

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

702' FNL, 2170' FWL (NE NW) Section 29, T9S, R16E,
SLB&M

14. PERMIT NO.

43-013-30446

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

6212' Ungraded Ground

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

Spud

XX

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Drilled 18" hole with dry hole rig & set and cemented 13-3/8" conductor csg at 32' KB., 6/27/78. Spudded 12 1/4" hole at 8 PM, 6/30/78. Drilled to 498' KB. Ran 12 jts 9-5/8" csg (5 jts 36#, K-55 & 7 jts 46#, N-80) w/Bakerline Guide Shoe & Float Collar. Landed csg at 497' KB. Cemented csg with 275 sx Class G w/2% CaCl. Currently drilling 7-7/8" hole at 2627' KB.

18. I hereby certify that the foregoing is true and correct
Signed By E. E. Mulholland

SIGNED

E. E. MULHOLLAND

TITLE

Operations Engineer

DATE 7/5/78

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

3-USGS,SLC,UT, 2-Div of OG&M, SLC,UT

1-J.L.Wroble, 1-E.R. Henry, 1-Partners, 1-File

*See Instructions on Reverse Side

USUAL ENVIRONMENTAL ANALYSIS

Operator: Pacific Transmission Well Name & No. Amoco Federal 21-29
Supply Company

Location: 700' F N L & 2,170' F W L NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 29, T. 9 S., R. 16 E.

County: Duchesne State: Utah Lease No.: U-7601

Field: Wildcat Unit: _____ Well Type: Gas

Date Inspected: May 31, 1978

Inspector: James P. Mitchell

Title: Environmental Scientist

Prepared by: James P. Mitchell

Other Agencies or Representatives concurrence:

Bill Arnold, Bureau of Land Management Yes

Major Federal action under NEPA No

EA No. 1081

The following participated in a joint inspection of the proposed well-site and access road:

<u>NAME</u>	<u>REPRESENTING</u>	<u>TITLE</u>	<u>STATIONED IN</u>
James Mitchell	USGS	Environmental Scientist	Salt Lake City, Utah (Temporary)
Ron Firth	Pacific Trans.	Engineer	Vernal, Utah
Ron Dethlefsen	Pacific Trans.	Office Manager	Vernal, Utah
Leonard Henney	Ross Construc.	Dirt Contractor	Vernal, Utah
Bill Arnold	BLM	Surface Proection Specialist	Vernal, Utah
Larry England	BLM	Botantist	Vernal, Utah

Proposed Action

Operator Name: Pacific Transmission Supply Company

Lease Number: U-7601

Well Name & No.: Amoco Federal 21-29

Location: NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 29, T. 9 S., R. 16 E.

Location moved from: No

Changes in access road: None

Surface Ownership: Bureau of Land Management

Date Application Filed: May 17, 1978

Objectives (oil or gas, proposed depth, zone, etc.): Gas, produced from Douglas Creek member of the Green River formation. Total depth, 4,700 feet.

Time Frame: 10-15 days to drill - move on by end of June.

Details of the operator's NTL-6 10-Point Subsurface and 13-Point Surface Protection Plans have been reviewed and are on file in the USGS District office in Salt Lake City, Utah, and the USGS Northern Rocky Mountain Area office in Casper, Wyoming.

A working agreement has been reached with the Bureau of Land Management, the controlling surface agency. Rehabilitation plans would be decided upon as the well neared completion; the Surface Management Agency would be consulted for technical expertise on those arrangements.

Environmental Consideration

The environmental considerations of this proposed action have been categorized into six parameters. These are: geology, soils, air, water, fauna and flora, and socio-economics, and land use.

The following is a breakdown of these parameters with emphasis given to those considerations of special significance to this proposed action.

Geology

Regional Physiography: Broad northeast-southwest trending ridge top bordered on the north by steep sided drainage and on the south by a series of small converging gullies.

Surface Geology: Uintah formation.

Potential Producing Zones and Depth: Douglas Creek member of the Green River formation at 4,577 feet.

Major Geologic Hazards: None

Seismic Risk: Moderate

Other Mineral Development in Area: None at this time. Oil shale of Green River formation is possible source of future area mineral development.

Soils

Light brown sandy clay with sandstone and shale parent material.

Air

Meteorology:

Mean Annual Temperature: 40° F

Temperature Extremes: 105° F to -20° F

Annual Precipitation: 6 to 8 inches

Frost Depth: 36 inches

Wind: West to east - steady

Toxic or noxious gases that may be encountered: None anticipated.

Air Quality:

No specific data on air quality is available at the proposed locations; however, data from the White River Shale Project infers that the existing air quality relative to Federal Ambient Air Quality Standards is good. There would be a minor

increase in air pollution due to emissions from rig and support traffic engines. Particulate matter would increase due to dust from travel over unpaved dirt roads. The potential for increased air pollution due to leaks, spills, and fire would be possible.

During the life of the project, but primarily during the drilling, dust levels and exhaust pollutants would increase. It is not expected that any long-lasting, detrimental reduction in overall air quality would result from the proposed action.

Water

Nearest Permanent Water of Significant Drainage: Green River, 10 miles east receives runoff from general area.

Water Wells in Area: None

The potential for spills, leaks, and related accidents would be present. However, a berm will be used to prevent spill-related damages in situations where drainages border the location. The pits will be unlined while drilling. If the well is a producer, and water disposal is involved, the operator must apply under USGS regulation NTL-2B for approval of whatever method he chooses for disposal of the produced water.

The operator's NTL-6 10-Point Subsurface and 13-Point Surface Protection Plans contain further information on protection of both the surface and subsurface waters of the area.

Fauna and Flora

Area Wildlife: Deer, coyotes, rabbits, and small rodents such as squirrels, mice, and moles comprise the mammalian wildlife species. Avian wildlife consists of sparrows, finches, raptors, magpies, and jays. Seasonally present are snakes and lizards of various types. Predatory birds such as various types of hawks and golden eagles are also present.

Vegetation: Sagebrush and native grass species typical of arid plains plant community.

Known Endangered and/or Threatened Species of Plants or Animals: None

Animals and vegetation of the area would be disturbed for the life of the project. If the project was to produce hydrocarbons, adjustments in habitat occupancy would be expected. No significant disturbance of nesting and/or breeding areas and migration routes is expected. At abandonment, normal rehabilitation of the area such as contouring, reseeding, etc., would be undertaken with an eventual return to the present status as outlined in the 13-Point Surface Plan.

Socio-Economics and Land Use:

Nearest Town and Direction: Myton, Utah, 20 miles northeast.

Nearest Dwellings and Direction: House, 10 miles northeast of location.

Wellsite Location in Reference to Existing Production: There are two producing oil wells about two miles west of the location.

Significant Area Historical, Cultural, or Archaeological Sites: Cultural resource inventory will be conducted prior to approval.

Primary Land Use: Winter grazing for cattle.

Area of Wellpad Disturbance: 1.55 acres

Area of Access Road Disturbance: 0.03 acre

Estimated Cut and Fill: 3-foot cut and 4-foot fill necessary to level location.

Area of Disturbance for Additional Producing or Treating Facilities, (if producer): None

Parks, forests, wildlife refuges or other formally designated recreation facilities in area: None

Method of Solid Waste Disposal: Hauled to dump in Myton in accordance with BLM recommendation.

The economic and environmental impact of a single well is normally somewhat negligible. But should this well discover a significant new hydrocarbon source, local, state, and possibly national economies might be improved. In this instance, other development wells would be anticipated, with substantially greater environmental and economic impacts.

The proposed location is within the Welle Draw allotment of the Myton Planning Unit. This Environmental Assessment Record was compiled by the Bureau of Land Management, the surface managing agency of the Federal surface in the area. The study includes additional information on the environmental impact of oil and gas operations in this area and gives land use recommendations. The EAR is on file in the agency's State offices and is incorporated herein by reference.

Alternatives to the Proposed Action:

Alternate locations, with due consideration given to environmental factors, were examined. No viable, alternate sites could be selected that were within the legal boundaries of the lease. To not allow surface occupancy is the only other alternative.

Unavoidable Adverse Environmental Effects of the Proposed Action:

Surface scars resulting from construction work to the wellpad and access road would be visible for the life of the project and for a period of time after abandonment until rehabilitation is completed. The disturbed

EA No.1081

areas would not be available for farming or grazing purposes during the project's lifetime. Relocation of area wildlife would be anticipated. Possibilities for spills and resultant erosion would exist, and a certain amount of air pollution from dust and exhaust fumes would also occur, as would an increase in noise levels. However, it is not anticipated that any of these adverse effects would cause a significant, lasting degradation of the environment.

Controversial Issues and Conservation Division Responses: None

Determination:

This requested action does not constitute a major Federal action significantly affecting the environment in the sense of NEPA, Section 102(2)(c).



Lease # 11-7601 (Facing N)
Arco Petroleum Co.
Pacific Transp. Co.

District Engineer
Salt Lake City, Utah

EA #1081

U. S. GEOLOGICAL SURVEY - CONSERVATION DIVISION

FROM: : DISTRICT GEOLOGIST, ME, SALT LAKE CITY, UTAH

TO : DISTRICT ENGINEER, O&G, SALT LAKE CITY, UTAH

SUBJECT: APD MINERAL EVALUATION REPORT

LEASE NO. U-7601

OPERATOR: Pacific Transmission Supply Co.

WELL NO. 21-29

LOCATION: 1/4 NE 1/4 NW 1/4 sec. 29, T. 9S., R. 16E., S1-M

Duchesne County, Utah

1. Operator predicted stratigraphy and predicted hydrocarbon zones are adequate? Yes.

If not, USGS predictions are: Surface formation: Uintah

2. Fresh water aquifers probable below surface casing? Yes.

3. Other probable leasable minerals? Yes.

Oil shale in Green River Group (1,600 - 4,700')

4. Are hazardous fluids or gases likely? No.

5. Are abnormal conditions of pressure or temperature likely? No.

6. Will any strata penetrated need special mud, casing, or cementing beyond that proposed in the APD? No.

7. Is additional logging or sampling needed? ?. Intervals for DIL & CNL-GR-CAL logging should be specified to include Total Depth to 1,600 feet.

8. References - remarks: USGS Files, Salt Lake City, Utah

Is location within 2 miles of a FGS? Yes. Within 1 mile of unnamed FGS

Signature: Donald C. Abord

Date: 05/29/78

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 42-R1424.
5. LEASE DESIGNATION AND SERIAL NO.

U-7601

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1.

OIL ☐ GAS ☒
WELL WELL OTHER

2. NAME OF OPERATOR

PACIFIC TRANSMISSION SUPPLY COMPANY

3. ADDRESS OF OPERATOR

P.O. Box 3093, Casper, WY 82602

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

702' FNL, 2170' FWL (NE NW) Section 29, T9S, R16E, S.L.B.&M.

7. UNIT AGREEMENT NAME

Gilsonite Draw

8. FARM OR LEASE NAME

Amoco - Federal

9. WELL NO.

21-29

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec. 29, T9S, R16E

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

12. COUNTY OR PARISH

Duchesne

13. STATE

Utah

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

PULL OR ALTER CASING

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input checked="" type="checkbox"/>

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Original Application for Permit to Drill (approved 6/16/78) proposed a well to penetrate the upper 350' of the Douglas Creek member of the Green River formation or to a total depth of 4700'.

Operator is currently drilling in Douglas Creek and now proposes to deepen the well to test the Wasatch formation or to a total depth of 8000'. Verbal approval to deepen as proposed granted by W.P. Martens, 7/10/78.

APPROVED BY THE DIVISION OF
OIL, GAS, AND MINING

DATE:

July 20, 1978

BY:

P. E. Mulholland

18. I hereby certify that the foregoing is true and correct

SIGNED

E. E. Mulholland
E. E. MULHOLLAND

TITLE

Operations Engineer

DATE

7/10/78

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

3-USGS-SLC, Utah, 1-Div of OG&M, 1-JLWroble, 1-ERHenry, 1-Partners, 1-File

PACIFIC TRANSMISSION SUPPLY COMPANY

212 GOODSTEIN BUILDING
P. O. BOX 3093
CASPER, WYOMING 82602
(307) 265-1027

July 5, 1978

Mr. P.L. Driscoll
Division of Oil, Gas, & Mining
1588 West
North Temple
Salt Lake City, UT 84116

Re: PTS #21-29 Federal
Sec. 29-T9S-R16E
Duchesne County, Utah
U.S.G.S. Form 9-331
Sundry Notice

Dear Mr. Driscoll:

We are enclosing herewith copies of the U.S.G.S. Form 9-331, Sundry Notice, notifying them of our spudding of the above captioned well. This form is being furnished to your office for information and file.

Very truly yours,


E. E. MULHOLLAND
OPERATIONS ENGINEER

/ks

Encl.

PACIFIC TRANSMISSION SUPPLY COMPANY

212 GOODSTEIN BUILDING
P. O. BOX 3093
CASPER, WYOMING 82602
(307) 265-1027

August 23, 1978

Mr. R. G. Jensen
AMOCO PRODUCTION COMPANY
Security Life Building
Denver, Colorado 80202

Reference: PTS #21-29 Federal
NE-NW Sec. 29-T9S-R16E
Duchesne County, Utah
Gilsonite Draw Unit

Dear Mr. Jensen,

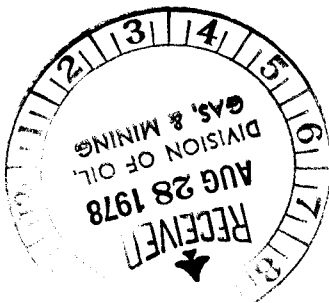
We are enclosing herewith the following material pertaining
to the subject well:

Geological Well Report

Drilling Time & Gas Detector Log

Very truly yours,

DEE E. BEARDSLEY
Manager of Operations



DEB:a

cc: Mr. J. L. Wroble
Mr. E. R. Henry
Mr. E. E. Mulholland
Mr. B. W. Allen
Mr. E. W. Guynn (USGS-Salt Lake, 2 copies each)
Mr. P. L. Driscoll (Div. Oil, Gas & Mining-Salt Lake)

encl.

PACIFIC TRANSMISSION SUPPLY COMPANY

212 GOODSTEIN BUILDING
P. O. BOX 3093
CASPER, WYOMING 82602
(307) 265-1027

July 10, 1978

Mr. P.L. Driscoll
Division of Oil, Gas, & Mining
1588 West
North Temple
Salt Lake City, UT 84116

Re: PTS #21-29 Federal
Sec. 29-T9S-R16E
Duchesne Co., Utah
U.S.G.S. Form 9-331,
Sundry Notice

Dear Mr. Driscoll:

We are enclosing herewith a copy of the U.S.G.S. Form 9-331, Sundry Notice, for the above captioned well notifying their office of our change of plans for this well. This is being furnished to your office for information and file.

Very truly yours,


E. E. MULHOLLAND
OPERATIONS ENGINEER

/ks

Encl.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input checked="" type="checkbox"/> Other _____		7. UNIT AGREEMENT NAME Gilsonite Draw	
b. TYPE OF COMPLETION: NEW WELL <input type="checkbox"/> WORK OVER <input type="checkbox"/> DEEP-EN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RESV. <input type="checkbox"/> Other _____		8. FARM OR LEASE NAME Amoco - Federal	
2. NAME OF OPERATOR PACIFIC TRANSMISSION SUPPLY COMPANY		9. WELL NO. 21-29	
3. ADDRESS OF OPERATOR P. O. Box 3093, Casper, Wyoming 82602		10. FIELD AND POOL, OR WILDCAT Wildcat	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 702' FNL, 2170' FWL (NE NW) Section 29, T9S, R16E, S.L.B. & M. At top prod. interval reported below At total depth		11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA Section 29, T9S, R16E	
14. PERMIT NO. _____ DATE ISSUED _____		12. COUNTY OR PARISH Duchesne	
15. DATE SPUDDED 6-30-78		16. DATE T.D. REACHED 7-27-78	
17. DATE COMPL. (Ready to prod.) _____		18. ELEVATIONS (DF, REB, RT, GR, ETC.)* 6212' GR, 6227' KB	
19. BLEV. CASINGHEAD 8006'		20. TOTAL DEPTH, MD & TVD 8006'	
21. PLUG, BACK T.D., MD & TVD _____		22. IF MULTIPLE COMPL., HOW MANY* _____	
23. INTERVALS DRILLED BY →		24. ROTARY TOOLS X	
25. CABLE TOOLS →		26. WAS DIRECTIONAL SURVEY MADE No	
27. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* None		28. TYPE ELECTRIC AND OTHER LOGS RUN Dual Laterolog, Comp. Sonic, Comp. Neutron Fm. Density	
29. CASING RECORD (Report all strings set in well)		30. TUBING RECORD	
31. PERFORATION RECORD (Interval, size and number) None		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. None	
33. PRODUCTION DATE FIRST PRODUCTION _____ PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) _____ WELL STATUS (Producing or shut-in) P & A		34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) _____ TEST WITNESSED BY _____	
35. LIST OF ATTACHMENTS _____		36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.	
SIGNED R. J. Firth		TITLE Petroleum Engineer	
DATE _____		DATE _____	

***(See Instructions and Spaces for Additional Data on Reverse Side)**

2-USGS, 1-Div. of OG&M, 1-JLWroble, 1-ERHenry, 1-EEMulholland, 1-File

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 23 and 24, and 23, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form; see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s), and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Seals Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORDED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH		TOTAL VERT. DEPTH
					FEET	INCHES	
			Tertiary Green River				
			Evacuation Creek				2596'
			Parachute Creek				3108'
			H Marker				3767'
			Douglas Creek				4506'
			GR Tongue				5858'
			Tertiary Wasatch				6016'

GEOLOGICAL WELL REPORT

Pacific Transmission Supply Company
#21-29 Amoco Federal
702' FNL, 2170' FWL (NE NW)
Sec. 29, T. 9S, R. 16E,; SLB&M
Duchesne Co., Utah

Submitted by:

H. E. Hutton
317 Goodstein Bldg.
P. O. Box 1138
Casper, Wyoming 82602
Phone: (307) 266-6108

Pacific Transmission Supply Company
#21-29 Amoco Federal
Duchesne Co., Utah

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Pacific Transmission Supply Company
#21-29 Amoco Federal
Duchesne Co., Utah

WELL DATA

Operator: Pacific Transmission Supply Company

Well Name: PTS #21-19 Amoco Federal Unit

Legal Location: 702' FNL, 2170' FWL (NE NW) Sec. 29, T. 9S., R. 16 E. **3**
SLB&M

County and State: Duchesne County, Utah

Elevations: 6212' GR 6226' DF 6227 KB

Contractor: R. L Manning Company

Equipment: Rig 19 - Elmer Sperry, Tool Pusher - Swabco Auto Driller
Don Wagner, Toolpusher

Commenced: 8:00 P.M. - 6/30/78 - Spud

Surface Casing: 32' Surface Conductor pipe set with dryhole digger before
rig up.
9 5/8" @ 497' with 275 sacks class G (2% calcium chloride).

Production Casing: None. Plugs: 7900-7725 with 35 sacks; 6000-5750 with 50
sacks; 5000-4750 with 50 sacks; 4500-4250 with 50 sacks;
3000-2750 with 50 sacks; 1800-1550 with 50 sacks; 550-300
with 50 sacks; surface with 10 sacks.

Hole Size: 12 1/4" 32' to 498'; 7 7/8" 498 - T.D.

Drilling Fluid: Contractor: Imco - Vernal, Utah. Fresh water 32'-4306'
changed to salt water - salt water 4306 - T.D.

Drill Stem Tests: DST #1 - 5448' - 5497'

Logging: Schlumberger: Dual Laterolog 497'-7992'
Compensated Neutron - Formation Density with Gamma Ray Caliper
497-8005
Borehole compensated - Sonic with Gamma Ray Caliper 497'-7996'
and "F" Overlay
Magnetic Taping.

Mud Logging: Wellsite Geologist Manning Tooke Engineering Portable.

Cores: None

Pacific Transmission Supply Company
#21-29 Amoco Federal
Duchesne Co., Utah

WELL DATA

Core Analysis: None

Drilling Time: Geolograph

Total Depth: Geolograph 8000' SIM Driller 7998', Sch. 8006

Ceased Drilling: 10:00 A.M. - 7/27/78

Samples Delivered: By Tooke to AmStrat - Casper
By Dave Hadden - To AmStrat - Casper

Sample Intervals: 500 - T.D. 10' Intervals

Geologist: H.E. Hutton - 500 - T.D., Consulting Geologist

Company Rep: Don Bowden - Arrow Operating Co.

Status: D & A - Rig Released 12:00 Noon 7/29/78

Pacific Transmission Supply Company
 #21-29 Amoco Federal
 Duchesne Co., Utah

WELL HISTORY

<u>Date</u>	<u>Drilled To:</u>	<u>Hrs. Drlg.</u>	<u>Activity</u>
6-28-78	32'		(Dry Hole Digger)
6-29-78	Rigging Up		Rigging Up
6-30-78	40'	2 3/4	Spud - 8:00 P.M.
7-1-78	295	15 3/4	Drilling Surveys - Repairs
7-2-78	498	7	Drilling - Surveys - Run Surface Casing Nipple Up
7-3-78	923	8 3/4	Nipple Up - Pressure Up - Drilling
7-4-78	2271	22 1/4	Drilling - Deviation - Surveys
7-5-78	3023	22 1/4	Drilling - Deviation - Surveys
7-6-78	3441	22 1/2	Drilling - Deviation - Surveys
7-7-78	3859	22	Drilling - Deviation - Surveys
7-8-78	4113	14	Drilling - Trip Bit #2 out, #3 in Drilling - Surveys
7-9-78	4539	22 3/4	Drilling - Surveys
7-10-78	4848	19 1/4	Drilling - Short trip - Hole in pipe
7-11-78	5141	23 1/4	Short Trip - Hole in Pipe - Drilling
7-12-78	5328	12 3/4	Drilling - Short Trip - Hole in Drill pipe; Drilling - Twisted off 13 DCs - Trip fishing tools
7-13-78	5340	7 3/4	Recovered fish - Trip out - Lay down fish - Magnaflux collars - Trip bit #4 in hole - Drilling
7-14-78	5497	1	Drilling - C & C DST #1 - DST #1 - Trip DST #1 out - Pickup D.C.s - Build mud volume for lost circulation after DST #1 SLM for DST #1 5475 Geol. Corr. to 5497 SLM
7-15-78	5760	21 1/4	Mix Lost Circulation Material - Trip in hole - Drilling

Pacific Transmission Supply Company
#21-29 Amoco Federal
Duchesne Co., Utah

WELL HISTORY

<u>Date</u>	<u>Drilled To:</u>	<u>Hrs. Drlg.</u>	<u>Activity</u>
7-16-78	6065	20 ½	Drilling - Mixing Mud
7-17-78	6175	9 ¼	Drilling - Twisted off - Fishing - Trips - Drilling
7-18-78	6273	7 ¼	Drilling - Twisted off - Fishing - Trips - Magnaflux - D.C.S. - Drilling
7-19-78	6457	18 ¾	Trip - Drilling
7-20-78	6712	23 ½	Drilling
7-21-78	6925	23 ¼	Drilling
7-22-78	7155	23 ¾	Drilling
7-23-78	7329	17 ¼	Drilling - Trip - Drilling
7-24-78	7569	23 ¾	Drilling
7-25-78	7718	15 ¼	Drilling - Trip - Drilling
7-26-78	7914	23 ¾	Drilling
7-27-78	8000	10	Drilling - C & C logs - Short trip for logs; C & C for logs - SIM out for logs
7-28-78	8000	----	Logging, Trips, C & C to plug.
7-29-78	8000	----	P & A, Trips, Release Rig

Pacific Transmission Supply Company
 #21-29 Amoco Federal
 Duchesne Co., Utah

DEVIATION SURVEY

<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>
$\frac{1}{2}$	100	$2 \frac{1}{4}$	3440
$\frac{1}{4}$	189	$1 \frac{1}{2}$	3573
$\frac{1}{4}$	350	$1 \frac{1}{2}$	3680
---	498	$1 \frac{1}{2}$	3813
$\frac{1}{2}$	1002	$2 \frac{3}{4}$	3976
$\frac{3}{4}$	1497	$2 \frac{1}{4}$	4060
2	2000	$2 \frac{1}{4}$	4185
$1 \frac{1}{2}$	2094	$2 \frac{1}{4}$	4318
$1 \frac{3}{4}$	2218	2	4499
$1 \frac{3}{4}$	2340	$2 \frac{1}{4}$	4759
$2 \frac{1}{2}$	2666	$2 \frac{1}{4}$	4937
$2 \frac{3}{4}$	2791	$\frac{3}{4}$	5210
$2 \frac{1}{2}$	2846	$2 \frac{3}{4}$	5340
$2 \frac{3}{4}$	2907	3	5443
$2 \frac{1}{4}$	2980	$2 \frac{1}{2}$	5709
$2 \frac{1}{4}$	3033	3	5890
$1 \frac{1}{4}$	3096	2	6151
$1 \frac{3}{4}$	3168	$1 \frac{3}{4}$	6372
$1 \frac{3}{4}$	3231	$1 \frac{1}{2}$	6583
Misrun	3345	$\frac{1}{2}$	7221
Misrun	3408	2	7624

Pacific Transmission Supply Company
#21-29 Amoco Federal
Duchesne Co., Utah

FORMATION TOPS

<u>FORMATION</u>	<u>LOG DEPTH</u>	<u>DATUM (6227 KB)</u>
Tertiary Green River Evacuation Creek	2596'	+3631'
Tertiary Green River Parachute Creek	3108'	+3119'
Tertiary Green River "H" Marker	3767'	+2460
Tertiary Green River Douglas Creek	4506'	+1721'
Tertiary Green River Tounge	5858'	+ 369'
Tertiary Wasatch	6016'	+ 211'

Pacific Transmission Supply Company
 #21-29 Amoco Federal
 Duchesne Co., Utah

MUD CHECKS

<u>Date</u> <u>1978</u>	<u>Depth</u> <u>Checked</u>	<u>Weight</u>	<u>Vis.</u>	<u>Water</u> <u>Loss</u>	<u>pH</u>	<u>Filter</u> <u>Cake</u>	<u>Plastic</u> <u>Vis.</u>	<u>Yield</u> <u>Point</u>	<u>Remarks</u>
6-30	0	FRESH WATER							Spud with fresh water
7-1	101	"	"						Fresh Water
7-2	---	"	"						Run Surface
7-3	531	"	"						Water
7-4	1851	"	"						Water
7-5	2805	"	"						Drilling with water
									Sweeping Hole
									Once daylites - 10 sacks
									gel - 1 sack lime
7-6	3235	"	"						"
7-7	3604								"
7-8	----	Cleaned pits on trip @ 4064'; Mud hand to be out to location at Salt Up 7-9-78, A.M.							
7-9	4306	Fresh Water							Begin change to salt
									water
7-10	4743	8.9	---	NC	9.0	---	---	---	Salt 57750 PPM
7-11	4999	8.9	27	NC	9.0	---	---	---	Salt 33000 PPM with
									Nitrates 100
7-12	5224	8.9	28	NC	9.5	---	---	---	Salt 34650 PPM with
									Nitrate 200
7-13	5328	9.1	No Rpt	NC	9.0	---	---	---	Salt 54450 PPM with
									Nitrate 200
7-14	5497	9.1	28	NC	9.5	1/32	---	---	Salt 59400 PPM with
									Nitrate 200
7-15	5550	9.0	28	NC	10.0	2/32	10	3	Salt 66000 PPM with
									Nitrate 180
7-16	5875	9.0	28	NC	10.0	2/32	No Rpt	No Rpt	Salt 74250 PPM with
									Nitrate 180
7-17	6103	9.0	No Rpt	20+	9.5	2/32	---	---	Salt 60000 PPM with
									Nitrate 170
7-18	6173	9.1	32	17	10.0	2/32	22	16	Salt 61750 PPM with
									Nitrate 170
7-19	6223	9.3	32	17	10.0	2/32	6	4	Salt 70000 PPM with
									Nitrate 100
7-20	6581	9.2	30	12	10.5	2/32	6	4	Salt 66000 PPM with
									Nitrate 100
7-2	6820	9.3	30	10.8	10.5	2/32	8	6	Salt 57750 PPM with
									Nitrate 170, Chromate 1700
7-22	7037	9.4	32	11.0	10.5	2/32	12	6	Salt 49500 PPM with
									Nitrate 170, Chromate 1800
7-23	7221	9.3	30	11.2	10.5	2/32	10	6	Salt 61750 PPM with
									Nitrate 160, Chromate 1500
7-24	7455	9.3	31	9.0	10.0	2/32	11	8	Salt 46200 PPM with
									Nitrate 160

Pacific Transmission Supply Company
 #21-29 Amoco Federal
 Duchesne Co., Utah

MUD CHECKS (continued)

<u>Date</u> <u>1978</u>	<u>Depth</u> <u>Checked</u>	<u>Weight</u>	<u>Vis</u>	<u>Water</u> <u>Loss</u>	<u>pH</u>	<u>Filter</u> <u>Cake</u>	<u>Plastic</u> <u>Vis.</u>	<u>Yield</u> <u>Point</u>	<u>Remarks</u>
7-25	7624	9.3	33	12.5	10.5	2/32	10	6	Salt 37950 PPM with Nitrate 150, Chromate 1500
7-26	7817	9.4	31	10.2	11.0	2/32	12	7	Salt 74250 PPM with Nitrate 160, Chromate 1400
7-27	8000	9.4	33	11.0	10.5	2/32	10	6	Salt 71650 PPM with Nitrate 150, Chromate 1200

Pacific Transmission Supply Company
 #21-29 Amoco Federal
 Duchesne Co., Utah

BIT RECORD

BIT NO.	MFGR.	SIZE INCHES	BIT TYPE	DEPTH OUT	FOOTAGE	FT/ HR	HOURS	1000# WEIGHT	PUMP PRESS	ROTARY RPM	REMARKS
1	HTC	12 $\frac{1}{4}$	J33	498	466	14.8	31 $\frac{1}{2}$	All	600#	80	Pulled for surface casing
2	STC	7 7/8	F45	4064	3566	32.8	140 $\frac{1}{4}$	24/40	1100#	72	
3	STC	7 7/8	F45	5328	1264	15.6	81	28/40	1100#	72	Twisted off and dropped 20'
4	STC	7 7/8	F 2	6103	775	14.5	53 $\frac{1}{4}$	30/32	1100#	72	Twisted off while drilling
5	HTC	7 7/8	J22	7221	1118	10.2	109 $\frac{1}{4}$	35/45	1200#	52	
6	Rerun #4 STC	7 7/8	F 2	7624	403	9.9	40 3/4	40	1200#	52	
7	STC	7 7/8	F 2	8000	376	8.6	43 $\frac{1}{2}$	36	1200#	52	For Logs.

Pacific Transmission Supply Company
#21-29 Amoco Federal
Duchesne Co., Utah

DRILL STEM TEST RECORD

DST #1 5448'-5497'
Test Periods: 30" - 30" - 60" - 180"
Initial Open: Opened with one bubble and died.
Final Open: No visible blow.
No GTS
Recovery: 5' drilling mud
Pressures: IHH 2550#, IFP 56#-47#, ISIP 66#
FHH 2540#, FFP 47#-47#, FSIP 56#
BHT 138°
Sampler: Total Volume 2100 cc
Sampled 2100 cc mud
10 PSIG

LITHOLOGIC DESCRIPTIONS

500- 510	Plug and Cement.
510- 540	Cement, plug and minor siltstone, dark to medium gray.
540- 550	Cement decreased, mica, dark to light.
550- 570	Siltstone and Claystone predominate, medium to dark medium gray with trace of quartz grains with mica with much cement and plug contamination.
570- 600	Siltstone and claystone; gray to tan with minor grain with minor admixed gilsonite. Sample quantity very limited, poor quality 600-1300 feet.
600- 620	Siltstone and claystone; gray to pink to tan, very fine.
620- 640	Claystone, dark brownish gray and siltstone, light gray, very fine, sub-round.
640- 700	Sandstone, siltstone; light to medium gray, very fine to fine, sub-round, soft and claystone, gray to brown, NOSCOF.
700- 750	Sandstone to siltstone; light to medium gray, very fine to fine, sub-round, soft and claystone, brown to gray.
750- 770	Claystone to siltstone; dark olive in most with some light pinkish tan.
770- 800	Siltstone to claystone; medium to light gray with minor brown.
800- 810	Siltstone to claystone; light to medium gray with very minor dark brown and light pink.
810- 850	Siltstone to sandstone, light gray to white, very fine to fine, sub-round, soft with claystone light to medium gray.
850- 880	As above with admixed, dark, olive brown, firm, siltstone limy with rare trace of gilsonite.
880- 910	Siltstone to sandstone; white to light gray, very fine to fine, sub-round, soft and claystone, pinkish gray, limy.
910- 920	Sandstone, white to gray, fine, angular, frosty, quartz grains with admixed light to medium gray claystone and siltstone.

920- 950	No Samples
950- 970	Siltstone and claystone, light to medium gray to pink, very fine, soft and siltstone, dark olive, firm, very limy.
970- 990	As above with gilsonite.
990-1000	Siltstone and claystone, varicolored gray to brown to pink.
1000-1080	Siltstone, light gray to green gray, very fine with minor gray to green gray claystone.
1080-1090	As above micaceous with trace of pyrite.
1090-1140	Siltstone, white to light gray to light green gray, very fine, firm with very rare quartz sand grains, sub-angular.
1140-1190	Siltstone, dark olive brown, very fine, firm, limy and green gray to medium gray with minor admixed quartz sand grains; siltstone grades to claystone in part.
1190-1200	Sample missing.
1200-1210	Siltstone, dark to medium gray, very fine, limy with admixed dark olive brown, siltstone, limy.
1210-1220	Siltstone, light to dark gray, very fine, limy, with gilsonite with trace of limestone, light tan, microcrystalline.
1220-1250	Siltstone and claystone; light gray to pink to brown, very fine, limy most with trace of gilsonite.
1250-1280	As above with moderate gilsonite.
1280-1300	Siltstone and claystone, green gray to gray to tan to dark olive brown, limy, firm to soft, some gilsonite with minor sandstone, light gray, fine to very fine, sub-round.
1300-1350	As above with very minor slightly salt & pepper looking, dirty, silty sandstone.
1350-1360	As above with trace of bright green chlorite mica.
1360-1400	Siltstone to sandstone, light gray to medium gray and brown, limy with admixed claystone, gray to light pink tan with dull organic fluorescence at 1310 to 1390 feet, very spotty in pinkish tan clayey siltstone, no cut.
1400-1450	Sandstone grades to siltstone, gray to brownish gray, fine to very fine, sub-round, soft and clayish, medium green gray to tan with a trace of light tan microcrystalline limestone. Claystone and siltstone, green gray to light gray to tan, very fine, limy.

1450-1460	As above with gilsonite.
1460-1500	Siltstone to claystone, gray to green gray to dark brown, limy and with minor sandstone, white to clear, fine to very fine, frosty quartz, sub-angular to sub-round with dark accessory with trace of white clay. NOSCOF.
1500-1530	Siltstone grades to sandstone in part, light to medium gray, very fine to fine, sub-round, silty.
? Top O.S.	Sandstone with some dark brown siltstone and minor green gray to gray claystone.
1530-1590	Siltstone grading to sandstone. As above with siltstone. "Marlstone" dark olive brown, dolomitic to limy, silty, predominate.
1590-1640	"Marlstone", dark olive brown, dolomitic to limy, silty with minor siltstone to sandstone. ("Marlstones" fluorescence dull organic in most.)
1640-1700	"Marlstone" as above and siltstone, green gray, very fine, firm.
1730	
1700-1780	"Marlstone", dark olive brown, dolomitic to limy, silty with minor admixed siltstone, green gray, firm.
1780-1800	As above with trace of pyrite.
1800-1820	"Marlstone" predominate, dark olive brown, firm, dolomitic to limy, silty, with minor siltstone, light to dark gray, very fine, argillite with trace of limestone, light pinkish tan, microcrystalline.
1820-1830	As above with very minor sandstone, greenish gray, fine, sub-round granules, siltstone with trace of gilsonite.
1830-1850	"Marlstone" predominate. As above 20'.
1850-1870	"Marlstone" predominate, dark olive brown, dolomitic to limy, silty with minor admixed sandstone to siltstone, light gray, very fine, sub-round.
1870-1900	As above with trace of pyrite and trace of gilsonite.
1900-1920	"Marlstone: predominate, dark olive brown, dolomitic to limy, silty with minor admixed sandstone to siltstone, light to medium gray, very fine, sub-round with trace of loose frosty quartz grains. (Dull organic marlstone fluorescence in most.)
1920-1940	No Samples
1940-1980	"Marlstone" as above 20' with a very minor trace of sandstone and gilstonite.

1980-2010	"Marlstone" predominate, dark olive brown, silty, limy to dolomitic, firm with admixed moderate sandstone to siltstone, green gray to gray, fine to very fine, sub-round.
2010-2020	As above with few scattered, loose, frosty, angular quartz sand grains.
2020-2060	"Marlstone" predominate, dark olive brown, limy to dolomitic, silty with some minor admixed sandstone to siltstone, light to medium gray, very fine to fine, sub-round, soft with rare trace of gilsonite.
2060-2080	As above with trace of white clay and greenish gray sandstone to siltstone.
2080-2090	"Marlstone" predominate, dark olive brown, limy to dolomitic, silty, firm, siltstones minimal.
2090-2100	As above with abundance Kerogen.
2100-2120	"Marlstone" predominate, dark olive brown, limy to dolomitic, silty, firm with minimal siltstone.
2120-2140	As above with trace of greenish gray silty sandstone.
2140-2180	"Marlstones" as above.
2180-2200	As above with sandstone and siltstone, increased siltyiness.
2200-2210	"Marlstone" predominately, dark olive gray, silty, limy to dolomitic with minor to moderate sandstone to siltstone, dark to light gray, fine to very fine, sub-round.
2210-2240	As above with very minor sandstone to siltstone.
2240-2270	As above with trace of asphalt.
2270-2280	"Marlstone" predominately, dark olive brown, silty, limy to dolomitic, with minor sandstone to siltstone, green to blue gray, very fine, sub-round.
2280-2330	As above with minimal to no sandstone to siltstone.
2330-2400	"Marlstone" predominately, dark olive brown, silty, limy to dolomitic with slightly increased sandstone to siltstone light green gray to medium gray, very fine, sub-round.
2400-2420	"Marlstone" predominately, dark olive brown, silty, limy to dolomitic and siltstone to sandstone, gray to green gray, fine to very fine, sub-round with trace of white clay and trace of gilsonite.

2420-2430 As above with some admixed, white to frosty, loose, fine to medium, angular, quartz fragments.

2430-2460 "Marlstone" and siltstone to sandstone, as above 20'.

2460-2520 "Marlstone" predominately, dark olive brown, silty, limy to dolomitic with minimal sandstone to siltstone, as above.

2520-2590 "Marlstone" as above with increased Kerogen content.
as show up at 2593.

Sample Up @ 2593 "Marlstone" predominate, dark olive brown, limy to dolomitic, firm with no sandstone with tight slight fluorescent cut,
First Minor Show light gold with minor gilsonite, bubbling gas.

2590-2630 As above.

2630-2660 As above with moderate sandstone to siltstone, light gray to white, fine to very fine, sub-round, firm. NOSCOF.

2660-2680 No Samples.

2680-2700 "Marlstone", dark olive brown, silty, limy to dolomitic and sandstone to siltstone, light gray, fine to very fine, sub-round, silty sandstone with trace of asphalt in samples. Sandstone tight with trace of white bentonite clay.

2700-2710 As above with minimal sandstone.

2710-2720 As above 20' with moderate sandstone to siltstone.

2720-2770 "Marlstone", dark olive brown to dark brown, very silty, limy to dolomitic with abundance kerogen and asphalt with occasional gilsonite.

2770-2850 "Marlstone", dark olive brown to dark brown, silty, limy to dolomitic.
(Marlstone dull organic fluorescence in most) and siltstone, light tan, limy, good Kerogen content to fair content. Slight light gold cut fluorescence in marlstones from Kerogen with some minor gray siltstones.

2850-2880 "Marlstone", dark olive brown, silty, limy to dolomitic, good to fair Kerogen content, fluorescence organic to dull yellow and siltstone, brownish tan, limy.

2880-2930 As above and with sandstone, white to light gray, fine to very fine, sub-round, tight, grades to siltstone and with some siltstone dark green gray with trace of gilsonite and asphalt.

- 2930-3000 "Marlstone", dark olive brown, silty, limy to dolomitic, good to fair Kerogen content, fluorescence as noted and siltstones, brownish tan, limy with very minor greenish gray siltstone.
- 3000-3020 "Marlstone" dark olive brown, silty, limy to dolomitic, good to fair Kerogen and siltstones, brownish tan, limy with minor greenish gray siltstone with gilsonite.
- 3020-3040 As above with decreased gilsonite and increased greenish gray siltstone.
- 3040-3050 As above; minimal gilsonite and siltstone; Lithology changing.
- 3050-3090 "Marlstone" dark olive brown, silty, limy to dolomitic, good to fair Kerogen content, fluorescence as noted and siltstone, brownish tan, limy with minor siltstone, dark gray to green gray, very fine and trace of sandstone, white to gray, fine to very fine, sub-round, quartz grained, silty with very minor trace of white clay.
- 3090-3100 As above with sandstone decreased.
3150 Changing Here.
- 3100-3200 "Marlstone" dark olive brown, silty, dolomitic to limy with fluorescence and Kerogen as above with siltstone, dark to light gray, very fine, sub-round, grades to sandstone, light gray to white, fine, sub-round, tight, silty.
- 3200-3220 "Marlstone" dark olive brown, silty, dolomitic to limy with less Kerogen and siltstone to sandstone, dark to light gray to green gray, very fine to fine, sub-round, grades to sandstone, light gray to white, fine to very fine, sub-round. Tight, silty with trace of gilsonite and asphalt.
- 3220-3230 As above with increased gilsonite.
- 3230-3300 As above with decreased gilsonite.
- 3300-3360 "Marlstone", dark olive brown, dolomitic to limy, silty, Kerogen silty, decreasing to dull organic fluorescence and siltstone to sandstone. As above with rare asphalt.
- 3360-3400 As above, slightly more sandy and slightly more limy.
"Marlstone" dark olive brown, limy to dolomitic, silty and sandstone to siltstone.
- 3400-3500 Light gray to white to tan to green gray, very fine to fine, sub-round, limy in part, gray tints and green gray tints increasing in per cent.
- 3500-3540 "Marlstone", dark olive brown, dolomitic to limy, less Kerogen and siltstone to sandstone, dark gray to green gray to white, very fine to fine, sub-round, tight, silty, trace of pyrite.

3540-3560	No Samples.
3560-3580	Siltstone to sandstone, green gray to gray to tan to white, very fine to fine, sub-round, tight, no porosity and "Marlstone", dark to light olive brown, dolomitic to limy, silty.
3580-3600	As above with "Marlstone" rich in Kerogen with sandstone to siltstone decreased.
3600-3620	"Marlstone", dark to light olive brown, silty, dolomitic to limy, fair Kerogen content, dull organic to yellow fluorescence, more shaly with a trace of gilsonite with minor sandstone to siltstone as above.
3620-3680	As above with siltstone to sandstone increased to moderate per cent amount.
3680-3700	With trace of white clay and increased silty tan limestone.
3700-3740	Siltstone to sandstone, green gray to light tan to gray, very fine, sub-round, tight limy and "Marlstone", dark olive brown to light brown, fairly good Kerogen content, silty, dolomitic to limy.
3740-3770	As above with minor sandstone, white, fine, sub-angular, firm, calcite cement, tight. NOSCOF in sandstone with dull organic yellow fluorescence in "Marlstone".
3770-3780	As above with trace of gilsonite.
3780-3800	As above with decreased gilsonite.
3800-3860	"Marlstone", dark to light olive brown, shaly, silty, limy to dolomitic, dull fluorescence, moderate Kerogen content and sandstone to siltstone, tan to gray to greenish gray, very fine to fine, sub-round, tight, limy in most with very minor white clay, admixed with very very minor loose quartz grains.
3860-3870	"Marlstones" dark to light olive brown, silty, limy to dolomitic with fair Kerogen content and "oil shale" fluorescence.
3870-3890	As above with sandstone to siltstone, light gray to dark gray to white, very fine to fine, sub-round, tight, silty matrix.
3890-3900	As above with sandstone becoming mostly siltstone.
3900-3990	"Marlstone", light to dark olive brown, silty, limy to dolomitic and sandstone to siltstone, green gray to gray to white, very fine to fine, sub-round.
3990-4010	As above with minimal sandstone, dark gray brown, fine to very fine, sub-angular, tight, dark accessory.
4010-4030	Siltstone to sandstone, green gray to gray to tan, very fine, sub-round, tight and shaly "Marlstones", light to dark olive brown, limy to dolomitic, silty, Marlstones", decreasing from uphole.

4030-4040	As above with silky asphalt.
4040-4050	As above. No asphalt.
4050-4060	As above with abundance of asphalt.
4060-4120	Siltstone to sandstone, tan to white to green gray to gray, very fine to fine, sub-round, soft to firm, some white clay with moderate shaly "Marlstone", light to dark olive brown, silty, limy to dolomitic, dull organic "Marlstone" fluorescence.
4120-4200	"Marlstone" light to dark brown, shaly to silty, limy to dolomitic and minor siltstone to sandstone, green gray to white to light gray to tan, very fine to fine, sub-round, firm, tight with rare trace of asphalt.
4200-4220	No Samples.
4220-4250	Siltstone to sandstone, light gray to green gray to tan, very fine, sub-round, tight with dark accessory and "Marlstone" as above.
4250-4280	As above but mostly contaminated with lost circulation material additives.
4280-4300	As above.
4300-4310	Gilsonite, black conchoidal abundant, and sandstone to siltstone, gray to tan to green gray, very fine, sub-round and "Marlstone" light to dark olive brown, silty, shaly, limy to dolomitic.
4310-4320	Siltstone (50), light gray to dark gray to green gray, very fine to fine, sub-round, tight, grades to sandstone in part with minor white clay matrix and "Marlstone" (5), dark to light olive brown to tan, shaly, silty, limy to dolomitic.
4320-4330	As above siltstone (50), marlstone (50), and sandstone, white to green, very fine to fine, sub-round, tight, NOSCOF.
4330-4350	As above, siltstone (50), Marlstone (50), sandstone less than .05.
4350-4400	As above with slightly increased sandstone (60).
4400-4460	Siltstone to sandstone, light to moderate gray to green gray, very fine to fine, sub-round, tight, NOSCOF with "Marlstones" as above but very decreased.
4460-4500	As above with moderate very fine, white to gray sandstone, tight, NOSCOF with siltstone, green gray to gray, very fine, sub-round, as above, NOSCOF.

- 4500-4510 Siltstone, dark gray to medium gray with minor green gray, sub-round, tight and very minor sandstone, gray, very fine.
- 4510-4520 As above with abundant "Marlstone", dark to light olive brown, silty, shaly, dolomitic to limy "Marlstone", fluorescence scattered.
- 4520-4560 As above with siltstone and sandstone increased. NOSCOF. Tight, contaminated.
- 4560-4570 Siltstone, green gray to gray, very fine, sub-round, tight, grades to sandstone, gray to brownish, gray to white, very fine to fine, sub-round, dense, tight, NOSCOF and "Marlstone" with "Marlstone" fluorescence as above, limy to dolomitic. Shaly to silty.
- 4570-4600 As above with trace of gilsonite with sandstone tight and NOSCOF with very minor trace oolitic limestone. Gas show from gilsonite?
- 4600-4630 Siltstone; gray to green gray, very fine, dense, tight, grading to sandstone, white to clear, fine to very fine, dense, tight, NOSCOF, and "Marlstone" as above with "Marlstone" organic fluorescence.
- 4630-4680 As above with slightly increased sandstone and with trace of gilsonite.
- 4680-4690 *Siltstone, green gray to medium gray, very fine, sub-round grades to sandstone, white to light gray, very fine to fine, sub-round, dense to friable, trace of medium porosity, NOSCOF with admixed "Marlstone" as above. Sandstone has porosity and permeability medium, very slight white cut.
- 4690-4700 *As above with very slight increased sandstone with medium porosity and permeability and with dark accessory with NOSCOF with very very slight white gold cut.
- 4700-4720 Sandstone to siltstone, light gray to medium gray to white, very fine to fine, sub-round, friable, silty, tight to minor slight porosity, NOSCOF and clay shales, green gray to gray, silty, subwaxy with "Marlstone", dark to light brown, silty, shaly, limy to dolomitic with "Marlstone" organic fluorescence scattered and with very minor admixed white clay.
- 4720-4730 *As above with some gold fluorescence in sandstone and very slight gold to white cut from sandstone with trace of porosity and permeability.

- 4730-4740 As above.
- 4740-4750 As above with very slight pinkish tan oolitic limestone.
- 4750-4800 Sandstone to siltstone, white to light gray to medium gray, fine to very fine, sub-round, tight and shale, green gray to gray, silty to subwaxy with "Marlstone" as above with dull organic fluorescence with rare sandstone fluorescence, gold to white as above with very minor admixed white clays.
- 4800-4850 Siltstone to sandstone, light gray to white to medium gray, very fine to fine, sub-round, silty, tight, NOSCOF and shale, green gray to gray to reddish, silty, subwaxy and "Marlstone", dark to light brown, shaly, silty, limy to dolomitic with dull organic marlstone fluorescence.
- 4845 Trip for Hole in Pipe. Bit not tripped.
- 4850-4870 As above with shale, green gray to gray with very minor trace of reddish gray, subwaxy, and siltstone to sandstone as above and "Marlstone" as above.
- 4870-4900 Predominately shale, green gray to gray, subwaxy, silty with moderate "Marlstone", dark to light olive brown, silty, shaly, limy to dolomitic with dull organic scattered fluorescence and with moderate sandstone to siltstone, gray to light gray to white, very fine to fine, sub-round, fairly tight to slightly porous, NOSCOF.
- 4900-4950 As above.
- 4950-4960 Shale; dark green gray to gray, subwaxy to silty, mostly limy and siltstone to sandstone, light to dark gray, very fine to fine, sub-round, tight, silty, no porosity, NOSCOF and some "Marlstone", dark to light olive brown, shaly to silty, limy to dolomitic with dull organic scattered fluorescence.
- 4960-4970 As above with sandstone increased some.
- 4970-4980 As above with occasional carbonaceous interlaminated on shale and trace of pyrite.
- 4980-4990 Predominately dark green gray to gray, shale with minor siltstone to sandstone as above.
- 4990-5000 As above. Trace of Pyrite and slightly increased sandstone.
- 5000-5010 Shale, green gray, waxy, limy and siltstone, gray, very fine, sub-round.
- 5010-5030* Shale, green gray to medium gray, waxy, limy and shale, dark gray to black, carbonaceous interlaminated with trace of pyrite and sandstone, white to light gray, very fine to fine, sub-round, firm to friable, bright yellow, fluorescent in part and yellow cut fluorescence with minor white clay and trace of pink limestone with moderate to minor "Marlstone" with dull organic fluorescence.

- 5030-5050 As above predominately shale, green gray to gray, waxy, limy and shale, dark gray to black carbonaceous and silty sandstone show minimal and with some "Marlstone".
- Changes.
- 5050-5060 Shale, green gray to medium gray, silty to waxy, limy with very minor green gray shale and mottled round shale pebbles inclusive.
- 5060-5070 As above with moderate siltstone to sandstone, light to dark gray to white, very fine to fine, sub-round, tight, mostly silty, NOSCOF and with fragments only of black "oolitic limestone with ostracods?"
- 5070-5080 As above with increased sandstone to siltstone with still abundant "Marlstone."
- 5080-5100 Shale, green gray to gray to black, waxy to silty to carbonaceous, limy most and sandstone to siltstone, gray to dark gray, very fine, sub-round, dense to friable, tight, NOSCOF with still abundant "Marlstone", light to dark brown silty, shaly, limy to dolomitic with dull yellow organic to spotty fluorescence.
- 5100-5120 Shale, green gray to dark gray, silty to waxy, limy in part and siltstone to sandstone, white to greenish gray, fine to very fine, sub-round, tight, no visible porosity with some sandstone with white clay matrix and "Marlstone", light to dark brown, shaly to sandy, limy to dolomitic with "Marlstone" fluorescence.
- 5120-5130 No sample.
- 5130-5150 As above 20'.
- 5150-5160 Shale, green gray to gray, silty to waxy, limy in part and minor siltstone to sandstone, greenish gray to gray, fine to very fine, sub-round, tight, NOSCOF, no pinpoint with "Marlstone", light to dark olive brown, silty to shaly, limy to dolomitic with "Marlstone" fluorescence, most of marlstone is slough.
- 5160-5170 Contaminated, all lost circulation materials.
- 5170-5190 Shale, siltstone to sandstone and marlstone. As above 10' with a rare trace of pyrite.
- 5190-5220 As above. Sandstone to siltstone, becoming minor to moderate in amount with a few loose quartz sand grains and a trace of white clay.
- 5220-5230 Shale, green gray to gray, waxy to silty, limy, slightly carbonaceous in part, and sandstone to siltstone, gray to white, fine to very fine, sub-round, dense to slightly friable and "Marlstone", dark to light olive brown, silty to shaly, limy to dolomitic with scattered dull light yellow, "Marlstone" fluorescence.
- 5230-5250 As above with sandstone increased some. NOSCOF with a trace of porosity and some white clay matrix in part.

- 5250-5270 Shale, dark gray to black, silty, carbonaceous in part, limy in most and shale, green gray to dark gray, subwaxy, slight silty limy and sandstone to siltstone, light gray to gray to white, fine to very fine, sub-round and "Marlstone", dark to light brown, limy to dolomitic, silty to shaly.
- 5270-5300 As above with slightly increased sandstone to siltstone with some loose sand grains.
- 5300-5320 Shale, green gray to gray, silty to waxy, limy and siltstone to sandstone, white to gray, very fine to fine, sub-round, friable to firm, calcareous to clay cement, NOSCOF and "Marlstone", light to dark olive brown, silty to shaly, limy to dolomitic.
- 5320-5330 No Samples. Tally Board Corrections.
- 5330-5350 Shale, dark brown, silty, carbonaceous with admixed black carbonaceous fragments, pyrite and minor shale, green gray, subwaxy.
- 5350-5353 Sample at gas kick.
- 5353-5370 As above with very slight milky white cut and with a trace of asphalt giving out.
- 5370-5380 Shale, black to dark gray, carbonaceous, very silty, tight with black carbonaceous fragments inclusive and shale, gray to green gray, subwaxy to silty, limy.
- 5380-5390 As above with moderate siltstone to sandstone, white to gray, fine to very fine, sub-round, tight most, some white clay matrix. NOSCOF.
- 5390-5400 As above with milky white cut from sandstone; less the 5% sandstone in sample.
- 5400-5420 Shale, dark gray to black, carbonaceous, silty and shaly, green gray to gray, waxy, slightly limy and siltstone to sandstone, light gray to gray to brownish gray, very fine, sub-round, no visible porosity, cuts with milky white cut with some white clay and minor "Marlstone", dark to medium olive brown, limy to dolomitic, silty to shaly with dull yellow "Marlstone" fluorescence.
- 5420-5430 As above. No fluorescence.
- 5430-5440 As above with sandstone increased to $\pm 10\%$ mostly; sandstone to siltstone, white to clear to brownish gray, fine to very fine with few scattered loose grains, sub-round, mostly tight with minor to some medium porosity, and bright gold sandstone fluorescence with moderate gold white cut.
- Fair to Good
Show
- 5440-5450 With increased sandstone to $20\% \pm$ fair cut.

5452	Ditto.
5455	Ditto.
5460-5470	As above with \pm 20% sandstone, gray to brownish gray to white to frosty, fine to very fine with some medium, sub-round, some fair to poor porosity with some bright gold fluorescence.
5475 - 20"	Ditto.
5475-5497	No Samples.
SIM	Steel line measurement.
5500-	Marginal quality samples. Losing circulation after drill stem test. Catching samples from flowline with bucket while having lost circulation material in system.
5500-5510	Sandstone and shale, predominately shale, green gray to gray, subwaxy to silty, limy and sandstone to siltstone, frosty to gray to white, fine to very fine, sub-round, firm to friable, NOSCOF.
5510-5520	As above with sandstone increased.
5520-5570	As above with some slough with less sandstone and with poor sample quality.
5570-5590	Shale, green gray to dark gray to black, silty to waxy, and sandstone, frosty to gray, fine to very fine, sub-round, dark accessory, some loose sand grains to grades to siltstone.
5590-5620	Sandstone, white to light gray, very fine to fine, sub-round, some white clay matrix grades to siltstone and shale, green gray to dark gray, silty to waxy, limy, NOSCOF.
5620-5640	Sandstone (50) and shale (50). As above with sandstone decreased. NOSCOF.
5640-5650	Sandstone to siltstone, white to light gray, fine to very fine, sub-round, tight, white clay matrix to limy cement with some admixed black accessory and moderate shale, gray to green gray, sub-waxy, silty, slightly limy. NOSCOF.
5650-5660	Shale, dark gray with some green gray, silty, limy and moderate sandstone to siltstone. As above.
5660-5670	As above. Sandstone to siltstone (5), slightly increased.
5670-5680	As above. Less sandstone.
5680-5690	CHANGE: Shale; varied, black to green gray to gray to red with minor black, silty, carbonaceous, shale and sandstone, white, fine to very fine, sub-round, limy most. Tight. NOSCOF with still some "Marlstone" scattered and with piece of "oolitic" black limestone.

5690-5700 As above with increased oolitic fragments and ochre and maroon shale tints with a trace of pyrite.

5700-5710 As above with very decreased varicolored shales.

5710-5760 Very poor samples.

5710-5720 As above. Poor samples. Mostly lost circulation materials.

5720-5730 Poor samples. Predominately varicolored shales, black green to green gray to dark red to black, silty, waxy, limy in most, with very minor sandstone to siltstone, dark gray, very fine to fine, sub-round, tight.

5730-5740 Shales as above but predominately dark green gray.

5740-5750 As above with increased sandstone.

5750-5770 Shales, green gray to dark gray to black, silty to waxy, limy to very slight limy and sandstone, dark to medium gray, very fine to fine, sub-round, tight, limy, NOSCOF with minor admixed "Marlstone" with "Marlstone" fluorescence.

5770-5780 As above with greatly increased sandstone to siltstone, very fine, sub-round, tight, slightly friable, limy, NOSCOF.

5780-5810 Shale, dark gray to black, very silty, carbonaceous and sandstone to siltstone as above but dirty, trashy with limestone tan to brown oolitic, with still minor "Marlstone" shows.

5810-5820 As above with trace of light tan oolitic limestone.

5820-5840 As above, sandier with one piece of bright gold fluorescent sandstone.

5840-5860 *Shale, dark to medium gray, subwaxy to silty, slightly limy and sandstone, gray to brownish gray, fine to very fine, sub-round, tight, good scattered bright gold fluorescence, very slight milky cut to no porosity or permeability. No gas detector anomaly. Poor show.

5860-5870 Shale, dark gray to brownish gray to black, silty, carbonaceous, dirty with some green gray, sub-waxy shale and trace of red shale with very decreased sandstone.

5870-5880 As above with dark gray to black, shaly siltstone, NOSCOF. Tight, very limy.

5880-5890 As above becoming predominately dark gray to black, very fine, limy, tight, siltstone. NOSCOF.

5890-5900	As above.
5900-5920	Shale, dark gray to black, silty, carbonaceous, limy and siltstone, dark gray, very fine, sub-round, shaly.
5920-5930	*As above with sandstone, light gray to brownish gray, very fine, sub-round, dense, tight, scattered rare gold fluorescence with very slight milky white cut, no porosity or permeability, tight, poor show.
5930-5960	Shale and siltstone, as above 20' 5900-5920.
5960-6010	Siltstone to sandstone, brownish gray to gray, very fine to fine, sub-round, dense, tight, NOSCOF and shale, black to dark gray, silty, slightly limy.
6010-6030	As above, more sandy.
6030-6050	*Sandstone, gray to brownish gray, fine to very fine, sub-round, friable to firm and dense, tight in most, scattered minor gold fluorescence and slight milky white cut as above, no porosity or permeability, poor show with few loose quartz sand grains and shales, green gray to gray, waxy to silty, slightly limy.
6050-6060	*As above with predominately sandstone but fluorescence very minor.
6060-6080	Shale, gray to green gray to black, waxy to silty to limy and sandstone to siltstone, dark gray to light gray frosty, fine to very fine, sub-round, pyrite white clay to limy matrix, tight, no porosity or permeability, with gold fluorescence and cut as above, very very slight.
6080-6100	Shales, green gray to black gray to gray with very very minor red fragments, silty to waxy, calcareous to non-calcareous and sandstone, white gray with some green gray, very fine to fine, very few medium grains, sub-round, friable to firm, trace of porosity, no fluorescence or cut.
6100-6120	Shales, varicolored, black to gray green to blue gray to red to maroon, silty and sandstone to siltstone, gray to frosty, fine to very fine, sub-round, tight mostly, limy with rare scattered gold fluorescence, poor porosity.
6120-6140	As above becoming more sandy with some loose sand grains and a trace of white clay fluorescence.
6140-6160	Shales, varicolored, very sandy to very silty and sandstone to siltstone, gray to frosty, fine to very fine, sub-round, friable to tight, silty, no porosity or permeability, NOSCOF.
6160-6190	Shales, varicolored, predominately green to red, very silty to very sandy, some black and gray with minor sandstone, frosty to gray, very fine to fine, sub-round, tight, NOSCOF with very minor trace of "Marlstone".

- 6190-6220 As above with sandstone increasing to moderate and becoming dark gray to brownish gray, very fine to fine, sub-round, limy cement in most, tight, no porosity or permeability, NOSCOF.
- 6220-6250 As above with sandstone decreasing to moderate to minor and with a few loose frosty quartz grains.
- 6250-6260 No Sample.
- 6260-6270 As above 30' from 6220' to 6250'.
- 6270-6280 Mostly trip slough.
- 6280-6330 Shales, varicolored, silty to waxy, limy in part, predominately red and very silty with very minor trace, sandstone, gray, very fine, sub-round, tight, NOSCOF.
- 6330-6370 Predominately sandstone, light gray to frosty, very fine to fine, sub-round, tight, friable to firm, NOSCOF and shales, varicolored, (red to gray to blue gray), silty to waxy, slightly limy in part with some white clay.
- 6370-6380 Shales, varicolored, predominately red, very silty to waxy, limy in part with minor sandstone, as above.
- 6380-6400 Shales, varicolored, predominately red, very silty to waxy, limy in part with minor sandstone, gray to pinkish gray, very fine to fine, sub-round, firm, tight, NOSCOF.
- 6400-6430 Predominately sandstone, gray to white, fine to very fine, sub-round, firm to friable, tight, NOSCOF and shale, varicolored as above.
- 6430-6450 As above but predominately shales.
- 6450-6500 As above, more sandy and more sandstone.
- 6500-6540 Shales, varicolored, predominately red, very silty to waxy, limy in most and sandstone, white to gray, fine, sub-round, firm to friable, tight, NOSCOF, limy to white clay matrix, and some minor amount of sandstone, reddish brown, fine, sub-round, tight, dirty, silty.
- 6540-6590 As above with very minor sandstone only.
- 6590-6600 As above with some sandstone increasing to moderate. NOSCOF.
- 6600-6630 Shales, varicolored, predominately red, very silty, limy with very minor sandstone, reddish brown, fine to very fine, sub-round, firm to friable, dense, tight, NOSCOF.
- 6630-6640 As above with a trace of gold sandstone fluorescence very minor.
- 6640-6700 As above with decreased reds.
*Poor samples 6680' to 6900'.

- 6700-6810 Shales, varicolored, red to green gray to blue gray, very silty to waxy, slightly limy, and sandstone, light to medium gray, very fine to fine, sub-round, firm, very minor to grades to siltstone and with much admixed sticky red clay.
- 6810-6910 Shales, varicolored, red to green gray to blue gray, very silty, waxy, slightly limy with very minor sandstone with some red clay.
- 6910-6930 Predominately sandstone, brown to gray, very fine to fine, sub-round mostly firm and tight with very slight trace of salt and pepper, limy cement mostly, dark accessory, NOSCOF and moderate shales, varicolored, silty, limy.
- 6930-6940 As above with some white clay matrix sandstone, slightly arkosic look.
- 6940-6970 As above with sandstone decreased some.
- 6970-7010 Shales, varicolored, silty, limy with moderate minor sandstone as above.
- 7010-7060 Shales, varicolored, predominately reddish brown, with green gray and minor black, silty, limy, with very little sandstone as above.
- 7060-7080 As above with one fragment each sample of slough "marlstone" with bright yellow fluorescence---not a show.
- 7080-7090 Shales, varicolored as above, predominately reddish brown with green gray to black, very silty, limy with very minor brownish sandstone as above.
- 7090-7100 No Sample.
- 7100-7110 Shales, varicolored, reddish brown to gray green with very minor black, silty to waxy, limy, some very minor mottled with sloughed "marlstone" with dull yellow fluorescence.
- 7110-7150 As above with moderate sandstone, dark gray to brownish gray, fine to very fine, sub-round, dense, quartzitic, tight, NOSCOF, sandstone, trifle shaly, shale inclusion, slightly arkosic look.
- 7150-7170 Shales, varicolored, brownish red to gray green to black, very silty to waxy in part, limy with very minor sandstone as above.
- 7170-7200 As above but sandier with sandstone, brownish red gray, very fine to fine, dirty, silty, shaly, (shaly, silty, sandstone--not good sandstone--not good shale.)
- 7200-7220 Shales, varicolored (brownish red to green gray to black) sandy to silty, slightly waxy in part, limy, grades to siltstone rarely.
- 7220-7230 Trip Slough. Plotted to here.

- 7230-7270 Shales, varicolored predominately, red, silty with green gray and gray, wavy, limy and sandstone, gray to frosty, fine to very fine, sub-round, firm to friable, NOSCOF.
- 7270-7300 As above. Sandstone (10) decreasing.
- 7300-7310 Shale, varicolored, green to reddish brown with very minor black, silty to waxy, limy.
- 7310-7330 As above with sandstone, light gray to white to brown, fine to very fine, sub-round, dirty matrix, silty.
- 7330-7360 As above with sandstone increasing (15), grades to siltstone and back to sandstone.
- 7360-7380 Shales, varicolored, green to red, silty to waxy, slightly limy (60) and sandstone, white to frosty gray to pink, fine to very fine, sub-round, white clay (40) matrix mostly with dark accessory, tight, NOSCOF with very minor black shale.
- 7380-7390 As above with decreased sandstone.
- 7390-7400 As above with increased (10) sandstone with trace of porosity but very minor mostly, tight (40).
- 7400-7430 Shales, varicolored green to red, silty to waxy, slightly limy and sandstone, pink to gray, fine to very fine, sub-round, clay matrix mostly, tight, (40) NOSCOF, dirty, dark accessory.
- 7430-7480 Shales, varicolored, predominately reddish brown to green to gray to black (90), silty, slightly limy with sandstone as above decreased to very minor amounts.
- 7480-7520 As above with sandstone (10' to 15') pink gray to white, fine to very fine, sub-round, silty, tight, dirty "arkosic" looking, moderate slough in samples.
- 7520-7530 As above with sandstone decreased, still some slough.
- 7530-7560 As above with very noticeable slough.
- 7560-7570 Shales, varicolored, reddish to green gray, silty, sandy, limy.
- 7570-7580 Shales, varicolored, red to green gray, silty to sandy, some waxy, limy and sandstone, light gray to pinkish white, fine to very fine, sub-round, white clay matrix mostly and limy cement rest, no porosity, NOSCOF.
- 7580-7610 Sandstone increased greatly and becoming cleaner (30) with dark accessory.
- 7610-7620 As above with decreasing sandstone (15).

7624	Trip.
7620-7630	No sample.
7630-7640	Trip Slough.
7640-7690	Shales, varicolored, red to green, waxy to silty with very minor blackish slightly sandier in part with very rare mottled shales.
7690-7720	Shales, varicolored, red to green with very minor black, waxy to silty, sandier in part and sandstone, pink to gray, fine to very fine, sub-round, firm, dirty, no porosity or permeability, NOSCOF.
7720-7730	As above with some sticky red clay and limy in most, loose sandstone, some slough.
7730-7750	Shales, varicolored, red to green with some black, waxy to silty sandy in part and sandstone, pink to gray, very fine to fine, sub-round, dirty, limy to shaly matrix most (25), no porosity or permeability, NOSCOF, sandstone grades to siltstone with minor white clay matrix sandstone, sandstone grades to siltstone with some rare mottled shale.
7750-7790	As above with silky red clay.
7790-7810	Shales, varicolored, predominately red, silty to sandy with green waxy and sandstone (15), pinkish to pinkish gray, fine to very fine, sub-round, tight, NOSCOF, dirty, clay matrix most.
7810-7850	Shales, predominately red, silty to sandy, limy with minor black and trace only of sandstone.
7850-7880	Shales, varicolored, predominately red, sandy to silty with some dense, waxy green gray and sandstone (40), pinkish gray with some red, fine to very fine, sub-round, shaly dirty, tight, NOSCOF.
7880-7910	As above. Increased sandstone (60).
7910-7930	Shale, predominately red with some waxy green gray, silty to sandy limy and sandstone (70), white to gray, fine to very fine, sub-angular, sub-round, poorly sorted in part, trace of porosity with varicolored accessory, dense, limy, cement.
7930-7960	As above with sandstone decreased with very sandy, silty, shales.
7960-7980	Sandstone, white to gray, fine to very fine, sub-round, tight to slightly porous, (50) mostly white clay matrix, NOSCOF, and shales, red, silty to sandy, limy.
7980-7990	Shales, red, silty to sandy, limy.
7990-8000	Shale as above and sandstone, pink to gray, fine to very fine, sub-round, dirty, sandy, silty in most with some clay, NOSCOF.

Contractor R.L. Manning Co.
Rig No. 19
Spot NE-NW
Sec. 29
Twp. 9 S
Rng. 16 E
Field Castle Peak
County Duchesne
State Utah
Elevation 6225' "K.B."
Formation Green River

Top Choke 1/4"
Bottom Choke 3/4"
Size Hole 7 7/8"
Size Rat Hole --
Size & Wt. D. P. 4 1/2" 16.60
Size Wt. Pipe --
I. D. of D. C. 2 3/8"
Length of D. C. 630'
Total Depth 5497'
Interval Tested 5448-5497'
Type of Test Bottom Hole
Conventional

Flow No. 1 5 Min.
Shut-in No. 1 30 Min.
Flow No. 2 30 Min.
Shut-in No. 2 30 Min.
Flow No. 3 -- Min.
Shut-in No. 3 -- Min.

Bottom
Hole Temp. 138°F
Mud Weight 8.9
Gravity --
Viscosity 28

Tool opened @ 1:10 PM.

Inside Recorder

PRD Make Kuster AK-1
No. 3812 Cap. 5100 @ 5451'

	Press	Corrected
Initial Hydrostatic	A	2519
Final Hydrostatic	K	2518
Initial Flow	B	40
Final Initial Flow	C	37
Initial Shut-in	D	56
Second Initial Flow	E	41
Second Final Flow	F	41
Second Shut-in	G	45
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--

Lynes Dist. Rock Springs, Wy.
Our Tester: John Webb
Witnessed By: Harold Hutton

Did Well Flow - Gas No Oil No Water No
RECOVERY IN PIPE: 5' Mud = .03 bbl.

1st Flow - Tool opened with a very weak blow, died and remained thru flow period.
2nd Flow - Tool opened with no blow and remained thru flow period.

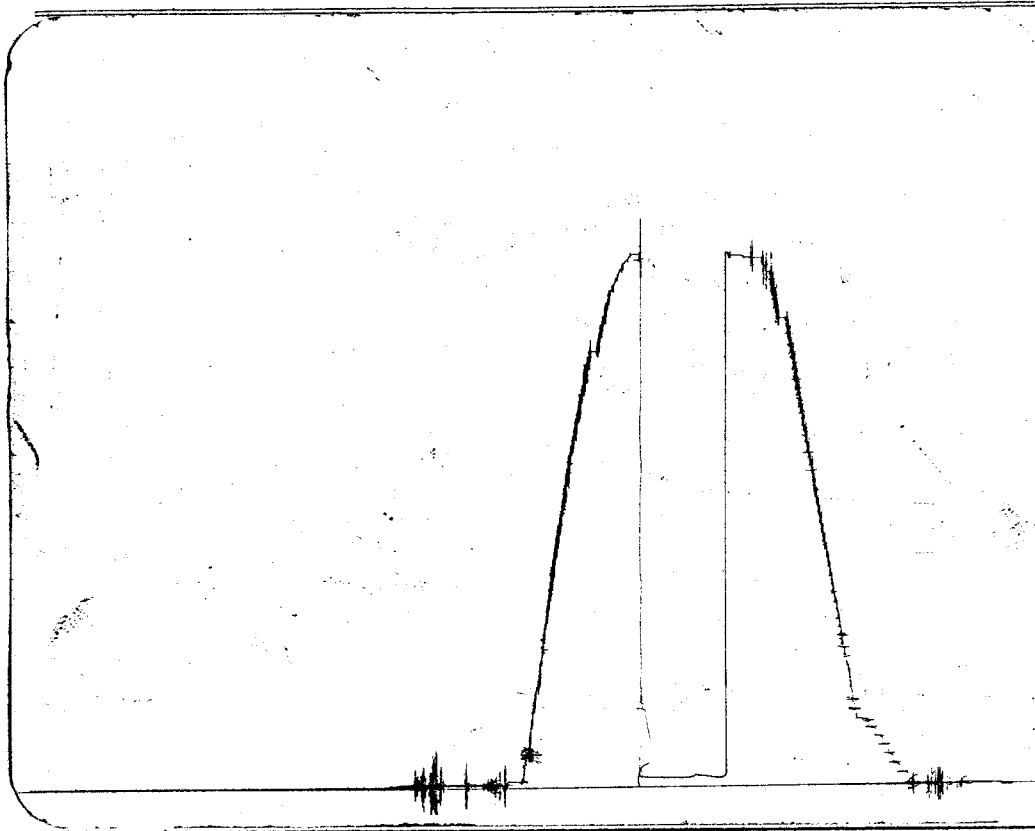
REMARKS:

Breakdown of shut-in pressures not practical for Horner extrapolations.

Operator Pacific Transmission Supply Co. Well Name and No. Amoco - Federal #21-29 Ticket No. 10331 Date 7-14-78 No. Final Copies 7

LYNES, INC.

Operator Pacific Transmission Supply Lease & No. Amoco - Federal #21-29 DST No. 1



Inside Recorder
PRD Make Kuster AK-1
No. 3697 Cap. 3700 @ 5456'

Press		Corrected
Initial Hydrostatic	A	2539
Final Hydrostatic	K	2535
Initial Flow	B	46
Final Initial Flow	C	39
Initial Shut-in	D	52
Second Initial Flow	E	41
Second Final Flow	F	41
Second Shut-in	G	43
Third Initial Flow	H	--
Third Final Flow	I	--
Third Shut-in	J	--

Pressure Below Bottom
Packer Bled To

PRD Make _____
No. _____ Cap. _____ @ _____

Press		Corrected
Initial Hydrostatic	A	
Final Hydrostatic	K	
Initial Flow	B	
Final Initial Flow	C	
Initial Shut-in	D	
Second Initial Flow	E	
Second Final Flow	F	
Second Shut-in	G	
Third Initial Flow	H	
Third Final Flow	I	
Third Shut-in	J	

Pressure Below Bottom
Packer Bled To

LYNES, INC.

Fluid Sample Report

Company Pacific Transmission Supply Co. Date 7-14-78
Well Name & No. Amoco - Federal #21-29 Ticket No. 10331
County Duchesne State Utah
Test Interval 5448-5497' DST No. 1

Total Volume of Sampler: 2100 cc.
Total Volume of Sample: 2100 cc.
Pressure in Sampler: 10 psig
Oil: None cc.
Water: None cc.
Mud: 2100 cc.
Gas: None cu. ft.
Other: None

Resistivity

Make Up Water 10.0 @ 70°F of Chloride Content 550 ppm.
Mud Pit Sample .3 @ 70°F of Chloride Content 22,000 ppm.
Gas/Oil Ratio _____ Gravity _____ °API @ _____ °F

Where was sample drained _____

Remarks: Recovery - R.W. .3 @ 70°F = 2200 ppm. chl.

LYNES, INC.

Distribution of Final Reports

Operator Pacific Transmission Supply Co. Well Name and No. Federal #21-29

Original: Pacific Transmission Supply Co., Box 3093, Casper, Wyoming 82602

Attn: Dee Beardsley

1 copy: Pacific Transmission Supply Co., 633 17th St., Suite 2140, Denver, Colorado

80202 Attn: J.L. Worble

1 copy: Pacific Transmission Supply Co., 245 Market St., Room 1620, San Francisco,

California 94105 Attn: E.R. Henry

1 copy: B.W. Allen, Almac Operating Co., Box 2352, Casper, Wyoming 82602

1 copy: Amoco Production Co., Security Life Bldg., Denver, Colorado 80202

Attn: R.G. Jensen

1 copy: U.S.G.S., 8426 Federal Bldg., Salt Lake City, Utah 84138 Attn: E.W. Guynn

1 copy: Division of Oil, Gas & Mining, 1588 West North Temple, Salt Lake City, Utah

84116 Attn: P.L. Driscoll

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TRI
(Other instructi
verse side)CATE
on reForm approved.
Budget Bureau No. 42-R1424.5. LEASE DESIGNATION AND SERIAL NO.
U-7601

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER Dryhole		7. UNIT AGREEMENT NAME Gilsonite Draw	
2. NAME OF OPERATOR PACIFIC TRANSMISSION SUPPLY COMPANY		8. FARM OR LEASE NAME Amoco - Federal	
3. ADDRESS OF OPERATOR P. O. Box 3093, Casper, Wyoming 82602		9. WELL NO. 21-29	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface 702' FNL, 2170' FWL (NE NW) Section 29, T9S, R16E, S.L.B. & M.		10. FIELD AND POOL, OR WILDCAT Wildcat	
14. PERMIT NO.		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Section 29, T9S, R16E	
15. ELEVATIONS (Show whether DF, NT, OR, etc.) 6227' KB		12. COUNTY OR PARISH Duchesne	13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETION

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Equalized abandonment cement plugs as follows:

Plug No. 1	7900'- 8000'	35 sacks cement
Plug No. 2	5900'- 6000'	50 sacks cement
Plug No. 3	4900'- 5000'	50 sacks cement
Plug No. 4	4400'- 4500'	50 sacks cement
Plug No. 5	2900'- 3000'	50 sacks cement
Plug No. 6	1700'- 1800'	50 sacks cement
Plug No. 7	450'- 550'	50 sacks cement
Plug No. 8	Surface	10 sacks cement

Dryhole marker installation waived. The reserve pit has been backfilled, and the location site has been cleaned and leveled. Reseeding operations to complete the surface restoration requirements will be done in mid-October after which an inspection notification will be submitted.

18. I hereby certify that the foregoing is true and correct

SIGNED

R. J. Firth

TITLE

Petroleum Engineer

DATE

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

3-USGS, 1-Div. of OGM, 1-JLWroble, 1-ERHenry, 1-EEMulholland, 1-File

*See Instructions on Reverse Side